EXTRAORDINARY CIVILIAN CAREERS, UNIQUE POSSIBILITIES

Imagine tomorrow...

Then come and create it as a civilian engineer, scientist, accountant, or contract administrator within the Naval Sea Systems Command.

http://www.navsea.navy.mil/CareerOpportunities/NAVSEACareers

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U.S. Citizenship Required
Introduction to Career Advising & Professional Development Staff

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Nyasha Toyloy, Events Assistant

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Julia Mongo, Staff Writer and Advisor
Kendyl Maher-Trumble, Communications Specialist

Find your path. Start the journey.

On behalf of MIT Career Advising & Professional Development (CAPD), I am pleased to welcome you to the 2018-2019 edition of the MIT Career Development Handbook! As the above tagline indicates, CAPD is here to help all MIT students, from freshmen to PhD, achieve lifelong success through career services, and connections with graduate schools and employers.

In my meetings with MIT students and alumni, the MIT Career Development Handbook is one of the most frequently cited resources that they rely on for their career planning. The handbook is a “how-to” guide for all aspects of effective career management. The handbook also provides an overview of all that CAPD has to offer you during your studies at MIT and beyond. Whether you are exploring your academic major and related careers; seeking an internship; searching for a job; or going on to graduate or professional school, CAPD offers expert advice and opportunities to help you every step of the way. This handbook begins the conversation about your future, with more in-depth content available through our website, workshops and programs, events connecting you with relevant professionals, and meetings with staff.

Our goal is to engage you in learning and in experiences that will prepare you to effectively manage your career and lifelong learning in a globalized society. So, find your path and start the journey, knowing that CAPD is your partner in this endeavor.

Sincerely,

Melanie L. Parker, Executive Director
Introduction to Career Advising & Professional Development

Mission Statement
Career Advising & Professional Development empowers MIT students and alumni to achieve lifelong success through seamless access to transformative experiences, comprehensive and holistic career services and mutually beneficial connections with employers and with graduate and professional schools.

Services and Resources

- **CAPD Website**
  Services, events, career info and more
  gecd.mit.edu

- **Career Services Drop-ins**
  15-20 minute sessions daily during academic year
  gecd.mit.edu/services/appointments

- **Career Appointments**
  Book online, by phone, or in person
  gecd.mit.edu/services/appointments

- **Career Workshops**
  Topics covered include Resumes, Interviewing, Negotiating, etc.
  gecd.mit.edu/mit-events

- **Job Postings**
  Find job and internship openings
  careerbridge.mit.edu

- **On Campus Recruiting**
  Interview with employers
  gecd.mit.edu/jobs-and-internships

- **Prehealth Advising**
  Med school application process and other health-related career advising
  gecd.mit.edu/med-school

Are you prepared to make informed career decisions? Consider the following:

**Self-Knowledge**
- I know what motivates me to excel
- I can identify my strongest abilities and skills
- I have some ideas of what I want to do during the next two to three years
- I can list my major accomplishments in action terms

**Knowledge of Employer Needs**
- I know what skills I can offer
- I can explain what I do well
- I can specify why an employer should hire me.

**Internship or Job Search Skills**
- I can conduct research on occupations, employers, and organizations
- I know where jobs and internships of interest are posted
- I know how to network to develop connections in occupations and companies that interest me
- I can write effective resumes, cover letters, and thank-you notes
- I know how to interview effectively

Job Search Tips where it was reprinted with permission from Change Your Job, Change Your Life by Dr. Ronald L. Krannich, 1995, Impact Publications.
Career Development Process

Self-Assessment

Self-assessment, or knowing yourself, provides an essential foundation for career decisions making. Thoughtful self-assessment helps you to focus on organizations and opportunities compatible with your goals, and enables you to market yourself knowingly and confidently. When choosing a career, it is important to consider your interests, skills, and values, but first you must know what they are!

Seven Clues to Help You Get Started

Learning your own unique pattern of interests, motivation, satisfaction, and meaning is an important first step in career development. Think about these questions and consider meeting with a counselor at CAPD to discuss your thoughts.

1. What classes fascinate and absorb you?
2. If you had three lifetimes, what dream jobs would you choose?
3. What do you naturally do well?
4. What local, societal, or world issues interest you?
5. What is the most gratifying thing you ever did? What experiences turned out to be the most dissatisfying to you?
6. If you knew you couldn't fail, what might you most like to do?
7. What is something you are doing when you lose track of time?

Accomplishments Inventory

Think about something you achieved or accomplished that you feel particularly proud of. These do not have to be academic accomplishments, but can come from any area of your life. What skills did you use to reach your accomplishment? Which skills did you enjoy using?

<table>
<thead>
<tr>
<th>Accomplishment</th>
<th>Why Are You Prou of This Accomplishment?</th>
<th>List of Skills Used</th>
<th>Enjoyed Using Skill</th>
<th>Did Not Enjoy Using Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accomplishment 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Accomplishment 2:</td>
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<tr>
<td>Accomplishment 3:</td>
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</tbody>
</table>

Adapted with permission from The University of Notre Dame’s Career Development Guide 2016-2017.

Career Development Process

Self-Assessment – Skills Inventory

Assess your skill level for each item on the 4 checklists below. Put a check by skills you think you have; double check skills you feel are your strongest.

1. FUNCTIONAL OR TRANSFERABLE SKILLS RELATED TO WORKING WITH PEOPLE

<table>
<thead>
<tr>
<th></th>
<th>Delegate</th>
<th>Motivate</th>
<th>Written Communication</th>
<th>Develop Rapport</th>
<th>Handle Complaints</th>
<th>Counsel</th>
<th>Listen</th>
<th>Interview</th>
<th>Interpret</th>
<th>Teach/Instruction</th>
<th>Coordinate Events</th>
<th>Arrange for Meetings</th>
<th>Train</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

2. FUNCTIONAL OR TRANSFERABLE SKILLS RELATED TO WORKING WITH OBJECTS OR THINGS

<table>
<thead>
<tr>
<th></th>
<th>Computer Skills</th>
<th>Precision Work</th>
<th>Handle Objects</th>
<th>Machine or Manual Skills</th>
<th>Creative Use of Materials/Artistic</th>
<th>Inspect</th>
<th>Build/Construct</th>
<th>Repair/Maintain</th>
<th>Mechanicall Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>

3. FUNCTIONAL OR TRANSFERABLE SKILLS RELATED TO DATA/IDEAS/INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>Investigate</th>
<th>Classify/Record Keep</th>
<th>Abstract</th>
<th>Copy/Duplicate</th>
<th>Store/Retrieve</th>
<th>Purchase</th>
<th>Account/Keep Books</th>
<th>Draft</th>
<th>Compute/Numberal Skills</th>
<th>Accurate/Attention to Details</th>
<th>Proofread</th>
<th>Plan (Utilizing Information)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

FUNCTIONAL SKILLS ANALYSIS from 1, 2, & 3

My most outstanding skills related to:

<table>
<thead>
<tr>
<th>Working with People</th>
<th>Objects/Things</th>
<th>Data/Ideas/Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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<tr>
<td>2</td>
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<td></td>
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<tr>
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<tr>
<td>5</td>
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</tbody>
</table>

Self-Assessment – Work Values Inventory

This checklist presents common “satisfaction factors” that people receive from their jobs. Begin by reading the entire list, then rate each item using the scale that follows. Circle your top 5 work values.

1 = Very Important
2 = Important
3 = Not Very Important
4 = Not Important at All

Help Society: Contribute to the betterment of the world I live in.
Help Others: Help others directly, either individually or in a group.
Public Contact: Have lots of daily contact with people.
Work with Others: Have close working relationship with a group.
Affiliation: Be recognized with an organization where status is important to me.
Friendship: Develop close personal relationships with coworkers.
Competition: Pit my abilities against others and where there are clear outcomes.
Make Decisions: Have the power to set policy and determine a course of action.
Work Under Pressure: Work where deadlines and high quality are demanded.
Power and Authority: Control other people’s work activities.
Influence People: Be in a position to change people’s attitudes and opinions.
Work Alone: Do things by myself, without much contact with others.
Knowledge: Seek knowledge, truth, and understanding.
Intellectual Status: Be regarded by others as an expert or a person of intellect.
Artistic Creativity: Do creative work in any of several art forms.
Creativity: Create new ideas, programs, or anything else not previously developed.
Aesthetics: Have a job that involves sensitivity to beauty.
Supervision: Guide other people in their work.
Change and Variety: Have changing job duties or settings.
Precision Work: Do work that allows little tolerance for error.
Stability: Have job duties that are largely predictable and not likely to change.
Security: Be assured of keeping my job and a reasonable financial reward.
Fast Pace: Work quickly and keep up with a fast pace.
Recognition: Be recognized for the quality of my work visibly or publicly.
Excitement: Work that offers change and stimulation.
Adventure: Do work that requires me to take risks.
Profit, Gain: A chance to accumulate money and goods.
Independence: Work on my own, determine my own work with little supervision.
Moral Fulfillment: Work that contributes to a set of important moral standards.
Location: Find a place to live that matches my lifestyle and personality.
Community: Live in a town where I can get involved with community affairs.
Physical Challenge: Have a physically demanding job that is rewarding.
# Career Development Process

## Choice of Major

- Choosing a major does not limit you to only one career choice.
- Choosing a career does not limit you to only one major.
- Graduate work does not have to be in the same area as an undergraduate degree.
- It is okay to change your mind.

### Considerations

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Course</th>
<th>Course</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appeal of area of study</strong></td>
<td></td>
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</tr>
<tr>
<td>• Will you enjoy studying this major?</td>
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<tr>
<td><strong>Level of challenge</strong></td>
<td></td>
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<tr>
<td>• Can you perform well in this field?</td>
<td></td>
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<tr>
<td>• Is your motivation strong enough to enable you to succeed in this major?</td>
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<td></td>
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<tr>
<td>• Are you choosing this major because it is easy? Because it is hard?</td>
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<tr>
<td><strong>Department characteristics</strong></td>
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<tr>
<td>• How big is the department?</td>
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<tr>
<td>• How do you relate to other students in this major?</td>
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<tr>
<td>• Are the faculty accessible? Do you seek them out for informal discussions and other interactions?</td>
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<tr>
<td>• Are there activities in the department that bring students together? Are there activities that bring students and faculty together?</td>
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<tr>
<td><strong>Courses within your major</strong></td>
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<tr>
<td>• Will this major help you acquire prerequisites needed for graduate studies you may be considering?</td>
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<tr>
<td>• How many credits does this major require? Do you wish to focus largely on one department, or do you want flexibility to study in other departments as well?</td>
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<tr>
<td><strong>UROPs/internship programs</strong></td>
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<tr>
<td>• Are there opportunities for you to get experience in your major that will help prepare you for your potential career?</td>
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<tr>
<td><strong>Skills</strong></td>
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<tr>
<td>• What kinds of skills will you develop?</td>
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<tr>
<td><strong>Family, peers, outside influences</strong></td>
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<tr>
<td>• How are outside pressures from family, peers and the job market influencing your decision?</td>
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<tr>
<td><strong>What else do you need to know to make a better decision?</strong></td>
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</tbody>
</table>

### Resources

- Undergraduate Departmental Administrators—great people to talk with about their departments: [http://web.mit.edu/acadinfo/deptcontacts/undergrad_administrators.html](http://web.mit.edu/acadinfo/deptcontacts/undergrad_administrators.html)
- Institute Career Assistance Network—browse this database to find out what alumni/ae are doing for work: [http://alum.mit.edu/benefits/CareerGuidance/ICAN](http://alum.mit.edu/benefits/CareerGuidance/ICAN)

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### Prehealth Advising Services

#### Individual Advising
We offer 45-minute appointments available in person, and by phone or WebEx for non-local students/alumni. We also offer weekly drop-ins for quick 15-minute questions. To book an appointment today, please log into Career Bridge: [careerbridge.mit.edu](http://careerbridge.mit.edu)

#### Mock Interviews
We help current applicants prepare for medical school and other health professional program interviews.

#### Essay Critiques
We provide advice on how to prepare the personal statement required of most health professional programs.

#### Workshops & School Visits
We offer a variety of programming throughout the academic year to help students explore their interest in healthcare and guide them through the application process. We also host visiting healthcare professional schools.

#### Physician Shadow Program
This program provides the opportunity to experience a day in the life of a physician and sparks the exploration of a path in medicine. Shadow opportunities are currently offered at MGH, Boston Children’s Hospital and Tufts Medical Center.

#### Committee Letter
MIT’s Committee on Prehealth Advising (COPA) can provide a letter of support for candidates to medical and other health professional programs. To receive a COPA letter a student must request it by submitting a non-refundable $100 fee. Learn more here: [https://gecd.mit.edu/grad-and-med-school/apply-medical-school](https://gecd.mit.edu/grad-and-med-school/apply-medical-school)

For more information about our services, please email [prehealth@mit.edu](mailto:prehealth@mit.edu) or visit our website: [https://gecd.mit.edu/grad-and-med-school/prepare-medical-school](https://gecd.mit.edu/grad-and-med-school/prepare-medical-school)
Prehealth Timeline and Considerations

Important things for prehealth students to consider while at MIT

MIT Premed & Health Professions Application Timeline

By now, you have explored the field, developed the competencies and experience for medical school, and know you want to apply. The timeline below will assist in keeping you organized throughout the application process.

<table>
<thead>
<tr>
<th>JUNE</th>
<th>JULY</th>
<th>AUG.</th>
<th>SEPT.</th>
<th>OCT.</th>
<th>NOV.</th>
<th>DEC.</th>
<th>JAN.</th>
<th>FEB.</th>
<th>MARCH</th>
<th>APRIL</th>
<th>MAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 30th</td>
<td>Submit Primary Application</td>
<td>Recommended Deadline</td>
<td>Complete Secondary Applications</td>
<td>Medical School Interviews</td>
<td>Medical Schools begin sending acceptances, rejections, waitlists – You may hold multiple acceptances until April</td>
<td>Undergrads Deadline to Submit Prehealth Credential Service Account</td>
<td>Alumni Deadline to Submit Prehealth Credential Service Account</td>
<td></td>
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</tr>
</tbody>
</table>

You Can Major in Anything
- There is no preference for certain majors
- Choose what you are most interested in as GPA does matter

Take Prerequisite Courses
- Consult Prehealth Recommended Course List
- Prepare for MCAT/DAT/GRE entrance exams

Gain Clinical Exposure & Research Experience
- Shadow physicians & other health professionals
- Volunteer in a hospital or other clinical setting
- Participate in research

Develop Competencies
- Review AAMC competencies
- Join clubs and organizations
- Study abroad and/or participate in MISTI

Get to Know Your Professors
- You will need to request letters of recommendation from faculty
- Attend office hours
- Take your favorite faculty member to dinner through MIT UA

Experience can come in many forms:
- Internship or summer job
- Research
- Service work
- Getting Experience
- Travel
- Study Abroad
- Military training

Experiences such as the above give you an opportunity to:
- Apply academic concepts in practice
- Explore possible future occupations
- Network with others in the field
- Develop transferrable skills such as communication, critical thinking, teamwork, change management, information technology, leadership, interpersonal diversity, social responsibility, and technical knowledge.

Did you know?
At least 60% of undergraduates and 35% of master’s students completed some sort of service experience while at MIT.
Source: GECD 2017 Graduating Student Survey

MIT offers a variety of programs and some have submission deadlines in the fall semester. If you are seeking an internship overseas, you will need to start your search process at least six months to a year in advance, depending on the countries to which you will be applying.

Source: GECD 2017 Summer Experience Survey

2017 Summer Experience Numbers by Class Year

- Worked in an Internship, Summer Job, or Service Work
- Worked in Research Position
- Traveled
- Other Activity
- Took a Class or Study Abroad
- Took the Summer Off
- Military Training

Source: GECD 2017 Summer Experience Survey
## Opportunities for Experience

<table>
<thead>
<tr>
<th>Programs/Internship Resources</th>
<th>Description</th>
<th>Year</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Momentum</td>
<td>Office of Minority Education IAP course with opportunity to interview for internships</td>
<td>Fr ✓ So ✓ Jr ✓ Sr ✓</td>
<td>ome.mit.edu/programs-services/momentum-overview</td>
</tr>
<tr>
<td>UPOP (Undergraduate Practice Opportunities Program)</td>
<td>Full-year professional development program for sophomores</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>UROP (Undergraduate Research Opportunities Program)</td>
<td>Flagship academic research program</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td>web.mit.edu/urop/</td>
</tr>
<tr>
<td>MIT Washington DC Summer Internship Program</td>
<td>Work in government agencies, private sector, or advocacy groups; seminar required during late spring and early fall for 12 units of credit; apply by Feb.</td>
<td>✓ ✓ ✓ ✓</td>
<td>web.mit.edu/summerwash</td>
</tr>
<tr>
<td>VI-A M.Eng. Thesis Program</td>
<td>Industry based internship for EECS students participating in the 5-year M.Eng. degree</td>
<td>✓ ✓ ✓ ✓</td>
<td>6a.mit.edu</td>
</tr>
<tr>
<td>Course Specific</td>
<td>Ask your department</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Student/Alumni Externship Program</td>
<td>Students join alumni in their workplace during January (IAP)</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td>alum.mit.edu/students/NetworkwithAlumni/ExternshipProgram</td>
</tr>
<tr>
<td>MISTI (MIT International Science &amp; Technology Initiatives)</td>
<td>Intern in companies and labs around the world; all expenses paid</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td><a href="http://misti.mit.edu/">http://misti.mit.edu/</a></td>
</tr>
<tr>
<td>Going Global</td>
<td>Resource for international jobs and internships</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td>careerbridge.mit.edu see Premium Services</td>
</tr>
<tr>
<td>Internships in CareerBridge</td>
<td>Internships listed by companies interested in MIT students; sign up for mailing list</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td>careerbridge.mit.edu</td>
</tr>
<tr>
<td>iNET Internship Network</td>
<td>Internships available to students from 11 universities</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td>gecd.mit.edu/resources/mit-only-resources</td>
</tr>
<tr>
<td>Federal Government Internships</td>
<td></td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td><a href="http://www.usajobs.gov/StudentsAndGrads">www.usajobs.gov/StudentsAndGrads</a></td>
</tr>
<tr>
<td>Nonprofit Internships</td>
<td></td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td><a href="http://www.idealist.org">www.idealist.org</a></td>
</tr>
<tr>
<td>Community Service/ Volunteering</td>
<td>MIT Public Service Center (PSC) provides advice, support, and funding</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td>gecd.mit.edu/jobs-and-internships/career-fairs-and-company-presentations</td>
</tr>
<tr>
<td>Internships at Career Fairs</td>
<td>Several throughout the academic year</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
<td>gecd.mit.edu/jobs-and-internships/career-fairs-and-company-presentations</td>
</tr>
</tbody>
</table>

## Networking

### What is it?
Networking is the process of building relationships and making connections to others who may provide you with advice, information, or further contacts. The members of your network will enhance your ability to make informed career decisions and may provide opportunities that you may not get otherwise. Your network can include individuals or groups.

### How do I build a career network?

- **Career sites (e.g. LinkedIn):** Create or update a LinkedIn profile or other appropriate professional career site profile. Take advantage of LinkedIn Groups such as Industry or Alumni associations (see page 21 for more information on LinkedIn).
- **Connect:** Add your connections to others (consider relatives, friends, social contacts, former work colleagues, bosses, contacts met at conferences and seminars, etc.). Consider making new connections in areas where you are lacking information or mentors.
- **Informational Interviews:** Reach out to your connections and tell them what you are up to and what your interests are. Ask them appropriate questions (see next page regarding Informational Interviewing).
- **Other social media:** Review your social media sites for appropriate content. Make sure private items are private, or remove them entirely (see page 25).
- **Elevator pitch:** Prepare and practice a 30-60 second “elevator pitch” that succinctly describes who you are and what you are seeking (see page 27).
- **Research:** Find out about companies of interest; try to learn the name of hiring managers based on a recommendation from your network. Attend company presentations.
- **Build:** Build relationships steadily over time.
- **Record:** Create a record of all contacts made for future reference.
Informational Interviews

Informational interviewing is a low-pressure way to gather career information from people who are already working in occupations, organizations, or geographic locations you are interested in. Both the content of the information, and the process of gathering it will help you to refine your career goals and possibly discover new ones.

1. Identify Professionals to Interview
   Start by asking people you already know.
   - Family, friends, neighbors, professors, or past coworkers may work in the career you want to explore.
   - The MIT Alumni Directory, LinkedIn, and professional associations are other places to find people who are working in your field of interest.

2. Connect with Contacts
   You can request to set up a meeting by email, in person, via social networking sites like LinkedIn, or on the phone.
   - Introduce yourself and explain how you got their name.
   - Tell them you are researching the field and seeking advice (Remain aware of the purpose of informational interviewing is not to ask for a job or internship).
   - Request a 20-30 minute meeting at their worksite if possible. Meeting at a local coffee shop, or via phone or Skype are good alternatives.
   - Be clear, concise, and courteous in your communication. (See example email to request an informational interview on page 58)

3. Prepare for Your Meeting
   Now it’s time to prepare for your meeting just as you would for an actual job interview.
   - Conduct preliminary research on the organization. Knowing some specifics about the occupation and the company will help you to create targeted questions, and show your enthusiasm and professionalism.
   - Develop and bring a list of open-ended questions that will help you evaluate if the career is a fit for you.
   - It’s important to clarify your objectives before the meeting to determine what information you are seeking. Your goals will change along a continuum from general career research to specific job research advice.

4. Conduct the Interview
   Informational Interviews are more casual than job interviews, but you should still make a positive impression. On the day of the interview:
   - Arrive early, especially if you are meeting in a public place such as a coffee shop. This will ensure you are able to find a place to sit.
   - You are leading the interview. Start by thanking the individual for his or her time.
   - Monitor the time and end the interview within the specified time.
   - Show gratitude after the interview by sending a thank you email or note within 24 hours.

5. Evaluate the Information Gathered
   Take a moment to reflect on the following:
   - What did you like? What positive impressions do you now have about this area of work?
   - Did you discover any new concerns about or advantages of the occupation?
   - How does this information help you to clarify your career objectives? Did you discover another occupation you might want to learn about?
   - What are your biggest challenges or problems you have encountered?

Ongoing

Keep a document with a record of the people with whom you have interviewed, the dates of the meeting, what was discussed, and names of additional contacts. The people you meet are potential members of your professional network.

Informational Interviews—Suggested Questions

Job Description
- What are your major job responsibilities? If possible, describe a typical work day or work week.
- What aspects of your job do you enjoy most/least?
- How is your time divided between working with people, data, and things?

Career Path
- How did you get into this field? Would you describe your career path?
- What are the typical entry-level jobs in this field? What are some possible career paths?
- How do most people enter this field?

Work Environment
- How would you describe your work environment?
- How much flexibility are you permitted in your job? How much autonomy do you have?
- How much work do you take home? How many hours do you work each week?
- Would a geographic move affect your career? If so, why?
- What are your biggest challenges or problems you have encountered?

Industry
- What are the challenges facing this industry today?
- Who do you consider to be the leaders in this industry? How do you view the current state of the industry?
- What changes do you see occurring in this field? Will the type and number of jobs change significantly over the next 10 years? What, if any, will be the effect of changing technology on the field?

Preparation
- What do you wish you had known before you entered this field? What is the best advice you were given when entering the field?
- What are the minimum qualifications a person needs to enter this field?
- Are there any professional groups in the field that you recommend I join?
- Where might I find job descriptions and other specifications for some of the positions in this field? Do you have any suggestions on my job search strategy?

Organization/Company
- What is the size and structure of your organization? What geographic locations do you have offices?
- How does the work of your group/division/office fit into the work of the overall organization? What is the average length of time employees stay with the organization?
- What type of formal on the job training is provided?

General
- Are there any questions I should have asked but did not?
- Do you mind if I stay in touch with you regarding my career search?
- Is there anyone else in the field with whom you would suggest I speak?
Getting Experience and the Job Search

Social Media

93% of recruiters are likely to look at social profiles
87% of recruiters find LinkedIn the most effective internet site when vetting candidates during the hiring process
72% of recruiters view typos negatively on social media
87% of recruiters have a negative impression of oversharing on social media

Influence of Social Media on the Hiring Process

Statistic Source: “Jobvite Social Recruiting Survey Results 2014, 2016”

Considerations

Control Your Image
Review your online presence...How do you appear on Facebook? YouTube? Your blog? Remove anything that could potentially damage your reputation. And for future posts, remember that anything you post might be accessed by others in the future.

Use Twitter
Employers post job opportunities on Twitter, so investigate whether your ideal employers have Twitter handles to follow. Also, consider searching for handles dedicated to internship postings such as @USA_Internship.

Communicate in a Professional Manner
Each interaction with your network or potential employers is a demonstration and potential evaluation of your communication skills. Maintain professional language at all times. Respond promptly to emails. Be careful not to communicate too frequently with minutiae, as this can be perceived as needy.

Be Active on LinkedIn
LinkedIn has become the preferred professional networking site for employers and employees. Create an account and keep it updated (see next page). Employers use LinkedIn frequently to vet candidates further so make it look professional.

LinkedIn—Professional Networking

Benefits
- Each month, 187 million users visit LinkedIn.
- LinkedIn:
  - provides an online professional presence
  - contains content from your resume, cover letter, and references for others to see
  - is a networking site that allows you to make new professional connections
  - contains access to job listings
  - contains information for research on companies or people you are going to meet
  - has a students job portal: http://www.linkedin.com/studentjobs

Building a Profile

Create a Profile Heading
Your headline is one of the most highly weighted elements in the LinkedIn search. It is your first opportunity to make an impression, so make it count!

Get a Professional-looking Photo
Avoid distracting backgrounds
Use a headshot with shoulders on up

Education
Make your education at MIT stand out by having the Education section towards the top of your profile
Include your major(s)/minor(s), study abroad, and GPA if it is strong.

Create a Professional Summary
Most users will see only the first 220 characters in the new LinkedIn version, so choose wisely.
You may talk about your qualifications, experience, and goals. First person is okay.

Skills and Endorsements
Your top 3 skills will be highlighted, so put them in order of importance

Join Groups
Join groups of professional interest; join discussion groups
Connect: build your network with quality contacts

Optimize your profile for search engines
Recruiters may find you through keywords
The Job Search

Job Search Action Plan

1. Choose the type of work you want
2. Get organized & set a timeline (consider recruiting cycles—they vary by industry)
3. Research and develop a list of jobs
4. Get your resume in prime shape
5. Apply
6. Interview
7. Get offer(s)
8. Evaluate and negotiate (if desired)

Tools for the Job Search

<table>
<thead>
<tr>
<th>Method</th>
<th>Site/Resource</th>
<th>Benefits</th>
<th>Cautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CareerBridge</td>
<td>careerbridge.mit.edu</td>
<td>Employers list jobs targeted towards MIT students; employers actively seeking to fill slots; on-site interviewing is convenient.</td>
<td>Not every industry or job field is represented.</td>
</tr>
<tr>
<td>On-Campus Interviews</td>
<td>careerbridge.mit.edu</td>
<td>Employers come to campus to interview for internships and jobs. Interviews take place at CAPD (E17-294).</td>
<td>Competitive. Not every industry or type of job represented. Starts very early in academic year, so plan ahead!</td>
</tr>
<tr>
<td>Career Fairs</td>
<td>gecd.mit.edu/jobs-and-internships/...</td>
<td>Opportunity to talk to many employers in one day. Several during the year, but the largest is early in the fall.</td>
<td>Can be overwhelming due to size. Need to plan in advance how to approach it. Can be very crowded. Go early before employers become exhausted.</td>
</tr>
<tr>
<td>Social Media (LinkedIn etc.)</td>
<td><a href="http://www.linkedin.com">www.linkedin.com</a></td>
<td>A great way to let others know more about you. Can be more detailed than a resume.</td>
<td>Make sure your online presence is professional and reflects well on you. Many employers will check before hiring.</td>
</tr>
<tr>
<td>Alumni Directory and ICAN</td>
<td><a href="http://www.alum.mit.edu/benefits/">www.alum.mit.edu/benefits/</a>...</td>
<td>Great for informational interviewing; alumni are willing to share their experiences and offer advice about career paths, interviewing and specific companies.</td>
<td>Do not expect alumni to hire you. The network should be used primarily for gathering information.</td>
</tr>
<tr>
<td>Company Websites</td>
<td>MIT Alumni Advisors Hub...</td>
<td>Targeted towards particular employers. Openings generally kept current.</td>
<td>Time consuming to search one-by-one.</td>
</tr>
<tr>
<td>Networking</td>
<td>alumniadvisors.mit.edu</td>
<td>One of the top ways to get a job. Personal connections give you the advantage. See page 17.</td>
<td>Harder if you are shy, so practice beforehand.</td>
</tr>
<tr>
<td>Job posting sites</td>
<td><a href="http://www.simplyhired.com">www.simplyhired.com</a>, <a href="http://www.indeed.com">www.indeed.com</a>, ...</td>
<td>Lots of openings listed, can do a targeted search and set up email alerts for new postings.</td>
<td>Many irrelevant listings; not targeted towards MIT students.</td>
</tr>
<tr>
<td>Portfolio sites (GitHub, etc.)</td>
<td><a href="http://www.github.com">www.github.com</a>, <a href="http://www.linkedin.com">www.linkedin.com</a>, ...</td>
<td>Very valuable way to showcase your talents; some employers ask to see your work this way.</td>
<td>Only put clean, polished work here. Make sure it reflects well on you and your skills.</td>
</tr>
</tbody>
</table>
Getting Experience and the Job Search

Career Fairs

Prepare
Research companies in advance; identify locations of ideal employers especially at the large fairs

What to Wear
Dress according to your profession; overdressed is better than underdressed

What to Bring
• 2 resumes per employer
• pens and paper
• portfolio as writing surface and to hold your resumes

What to Say
Have a 60-second elevator pitch ready and rehearsed (see the next page for developing one)

What to Ask
Prepare a list of questions in advance that demonstrate your knowledge of the company

Follow-up
Be sure to get names and business cards of individuals you speak with so that you can write a thank-you email

Possible questions to Ask Employers at a Career Fair
• How long have you worked at your company?
• Does your company hire on a continual basis or only at certain times of the year?
• What are the most important qualifications your company looks for in an employee?
• Are there particular personality traits you look for?
• How are graduate degrees important? In what areas within your company?
• What kinds of courses do you suggest in order to be a successful candidate?
• Is there a GPA cut-off for your recruiting process?
• What is the training process like at your company?
• What kinds of entry-level positions exist within your organization that would be open to someone with my background?
• Is senior management grown from within or does your company hire from the outside?
• What are your organization’s major goals in the next few years?

For a listing of current fairs:

Elevator Pitch

Identify the goal of the pitch
• Self-introduction
• Advertisement
• Building a connection

Clearly describe what you do
• What you study, research, build, make
• Past experiences

Focus on strengths
• Unique ideas, recent activities, latest accomplishments

Credit and/or compliment
• Team members, supervisors, mentors

Engage listener with a question
• Offer an opportunity to respond

Avoid Missed Opportunities
Often times, we miss opportunities because of our lack of intent, preparation, or comfort in commonplace conversations that are simply banal. We can also miss an opportunity to effectively communicate by minimizing or overinflating discussions of responsibilities and accomplishments.

Do Your Research
Developing a meaningful elevator pitch requires research on the person, company, organization, or program that you are making a connection with. You should pinpoint qualifications, skills, and experiences that best align with the opportunity and reiterate interest in learning more.

Body Language
Be mindful of body language and use hand motions moderately. Maintaining enthusiasm and energy is significant. If you jitter in nervousness, consider grounding your feet to the floor and lean in when appropriate. And most importantly, don’t underestimate the power of a smile.

Managing Anxiety and Self-Doubt
Engaging in persuasive speech and talking about yourself can be a daunting experience that spurs up anxiety and self-doubt. Manage your angst with breathing techniques, power poses, inspirational quotes, positive attitude, and humor.
Resume and Career Writing
Getting Experience and the Job Search

Elevator Pitch continued

Practice, Practice, Practice
Assess the content you might add to your elevator pitch, acknowledge your successes with confidence, examine your body language, and identify growth areas to continue strengthening your pitch. You can practice your elevator pitch using InterviewStream (gecd.mit.edu/resources), an online resource that will record a customized mock interview of you with features to evaluate your performance. Even while you practice, don’t forget to dress the part, sometimes a blazer goes a long way. Be sure to focus on the message and being true to yourself—authenticity is impressive!

Examples
"Hi, my name is Zoey Ali and I am a junior studying Material Science and Engineering with a minor in Computer Science. Last summer I interned at 3M working on a project with a team assessing the heat resistance of a new plastics product. I was able to use my skills in software engineering to analyze past product failures and predict upcoming product failures. While I am knowledgeable in statistical applications, I also have a strong background and interest in metals, energy, and manufacturing. It’s definitely been reassuring to see Boeing’s commitment to those areas in the last few years. What are the most collaborative projects that interns typically work on at Boeing?"

"Hi, my name is Jin Xia and I am a sophomore majoring in Biological Engineering. I am currently working in the laboratory of Dr. Lin, where our research is focused on correcting mutations that cause orphan diseases. While my research is in the early stage, I have successfully demonstrated that the CRISPR technology method works in my hands. I plan to combine this experience working with DNA sequences with the knowledge that I have gained in my computer science courses, to contribute to the field of computational biology. I understand that your company has a significant program in this area. Can you please tell me more about the ongoing projects in computational biology and the opportunities you have?"

Outline of a Possible Elevator Pitch

Greeting
Hello, my name is...

Year in School
I am a (sophomore, junior, etc.)...

Major
majoring in...

Experience
I have done (research, projects, etc.) on...

Accomplishments
I have (produced, presented, written)...

Seeking
I am seeking a(n) (internship, full-time job, etc.)

Question
I know your company has a program on (X, Y, Z), can you tell me a little bit about the ongoing projects in which interns could participate?

Use concrete action verbs (see page 29) and quantify items when possible.

Samples of how to best represent your experiences:

Before:
Theatre Marketing Intern
Responsibilities included coordinating artist press releases, compiling tracking sheets based on information from reservations and box office attendants, handling photo and press release mailing to media, assisting in radio copy writing and performing various other duties as assigned.

After:
Cambridge Performing Center (CPC), Cambridge, MA May 2015–June 2016
Theatre Marketing Intern
• Coordinated press releases that contributed to an increase in annual sales by 10%
• Compiled and maintained a mailing list of 10,000 customers, CPC’s largest ever
• Organized photo and press releases to XYZ Television and Cambridge Daily News
• Contributed to the copy writing of promotional radio commercials for five events

Before:
Bright Consulting Group, New York, NY June–August 2016
Marketing Analyst
I analyzed competitive strategies for clients in the bio tech industry. Data gathered assessed profitability of strategies

After:
Bright Consulting Group, New York, NY June–August 2016
Marketing Analyst
• Assessed profitability of expansion strategy in the biotech industry; results were used by the client to make market entry decision
• Gathered data, as part of a three-member team, by interviewing over 100 potential customers and presented the results to the clients

Your resume provides an overview of your experience and is often an employer’s first impression of you. Recruiters spend just a few seconds on average looking at a resume so it is crucial to use a format that makes relevant information immediately visible. A good resume can help you land an interview, but even minor errors can take you out of the running. Bring your resume to our drop-in hours or schedule an appointment with a counselor to ensure it will be effective.

For each experience on your resume, write a PAR statement:

P: Describe the PROJECT, the context, task or job.
A: What ACTIVITY did you do?
R: What were the RESULTS, outcomes, benefits?
### Resume and Career Writing

**Resumes: Writing About Your Skills continued**

**Samples of First-Year PAR Statements**

- **Math Team Captain**
  - Organized review sessions for 15 participants and scored practice tests, leading team to Top 5 finishes in the Arizona State Math League.

- **National Honor Society Service Chair**
  - Coordinated the Senior Citizens Ball, which raised $1500 for a new Senior Activities Center.

- **Swim Instructor**
  - Taught children between the ages of four and six basic swimming techniques to promote water safety and awareness.

- **Radio Shack Assistant Manager**
  - Communicated product details and provided exceptional customer service to 50+ people per day. Promoted from cashier to Assistant Manager after only four months.

- **Burger King Team member**
  - Worked in a fast-paced environment, received food-handling/cashier training, and experienced assembly line teamwork.

**Examples of Upperclassman/Graduate Student PAR Statements**

- **Undergraduate Researcher**
  - Investigated effects of gas phase oxygen concentration levels on Chinese Hamster Ovary cells in order to establish optimal settings for cell growth.
  - Reduced cell division time by 30%.

- **Safety & Regulatory Engineering Intern**
  - Performed electromagnetic compatibility testing on X-ray, Ultrasound, and CT devices to ensure proper functionality.
  - Reduced RF emissions of medical equipment by 50%.

- **Project Manager for Senior Design Team**
  - Analyze and evaluate current layout of the window fabrication facility. Collect and interpret flow data and presented results to the 5-person management team.

- **Summer Engineering Intern**
  - Analyzed office layout and curtain walls using CAD skills.
  - Assisted applications engineers in preparing stamped structural calculations.

- **Software Intern**
  - Incorporated new algorithms into pipeline simulation modules and achieved a tenfold increase in speed.

### Action Verbs

**Management Skills**
- Reconciled
- Recruited
- Administered
- Spoke
- Coordinated
- Directed
- Organized
- Planned
- Prioritized

**Research Skills**
- Clarified
- Collected
- Critiqued
- Examined
- Executed
- Identified
- Inspired
- Interpreted
- Interviewed

**Communication Skills**
- Addressed
- Arbitrated
- Arranged
- Author:
- Co-authored
- Collaborated
- Corresponded
- Reviewed
- Scheduled
- Supervised

**Technical Skills**
- Assembled
- Built
- Calculated
- Designed
- Devised
- Fabricated
- Maintained
- Operated
- Designed
- Developed
- Executed

**Creative Skills**
- Acted
- Conceptualized
- Created
- Customized
- Designed
- Developed
- Directed
- Established

**Financial Skills**
- Administered
- Allocated
- Analyzed
- Appraised
- Audited
- Balanced
- Budgeted
- Calculated
- Developed
- Managed

**Helping Skills**
- Assisted
- Clarified
- Coached
- Counseled
- Taught
- Trained

**Stronger Verbs for Accomplishments**
- Accelerated
- Achieved
- Attained
- Completed
- Conceived
- Convinced
- Discovered
- Doubled
- Effect
- Eliminated
- Expanded
- Expelled
- Foun
ded
- Improved
- Initiated
- Innovated
- Introduced
- Invented
- Laun
ded
- Mastered
- Originated
- Overcame
- Overhauled
- Pioneered
- Reduced
- Resolved
- Revitalized
- Spearheaded
- Strengthened
- Transformed
- Upgraded

**PERSONAL STRENGTHS**
- Strong
- Teamwork
- Interpersonal skills
- Communication
- Problem-solving
- Leadership
- Project management
- Time management
- Adaptability

### Skills

- **Communication**
  - Negotiated
  - Persuaded
  - Promoted
  - Publicized

- **Teaching**
  - Adapted
  - Advised
  - Clarified
  - Coached
  - Communicated

- **Systemization**
  - Arranged
  - Addressed
  - Analyzed
  - Assembled

### From To Boldly Go: Practical Career Advice for Scientists, by Peter S. Flase
# Resume and Career Writing

## Resume Checklist

### General Format
- Have you used Microsoft Word? Do not use a template; applicant tracking systems have trouble reading it.
- Are the margins consistent and > 0.5 inches and < 1 inch?
- Is your font size > 10 pt and < 12 pt? Is the font easy to read (Arial or Times New Roman, etc.)?
- Have you kept it to one page? You may use two pages if you have an advanced degree or extensive experience (10+ years).
- Have you left enough white space to make it easy to read?
- Have you used boldface and italics appropriately (headers or positions) and avoided underlining?
- Are dates clear and consistent? Is format and punctuation consistent?
- Are sections listed in order of importance to the employer?
- Are heading names descriptive (e.g. Research Experience, Leadership & Service, etc.)?

### Contact Information
- Is your legal name clear and bold at the top? (also on the second page if applicable)
- Is your phone number included? Do you have a professional voicemail recorded?
- Is your email address included? Does it sound professional?
- If you are a US citizen or hold a permanent resident VISA, did you include this if readers might think otherwise?

### Education
- Are college/university names spelled out? (i.e. Massachusetts Institute of Technology not MIT)
- Did you list the official name of your degree or course?
- Did you list the month and year you earned or expect to earn your degree?
- Did you consider listing your GPA if strong (include scale if you list the GPA)
- Did you list coursework that aligns with your job search?

### Experience
- Did you clearly list the organization/company name and your job title?
- Did you include the city and state (or country) in which you worked?
- Are the dates of employment listed for each?
- Did you list the project, activity, and results for each?
- Did you start each phrase with an action verb? (tenses: Past for past work, present for ongoing work)
- Did you give evidence and quantify relevant information (e.g. size, scale, budget, staff) for impact?
- Have you used keywords that apply to your industry and/or the job listings?
- Have you avoided the use of “I”?
- Have you considered and included all aspects of your experiences related to the job opening(s)?

### Skills
- Have you included all relevant skill types (Programming languages, Foreign language, Lab skills etc.)?
- Did you list all relevant skills within each skill type?

### Activities/Honors/Leadership
- Did you list the activities, honors, and/or leadership experiences that are relevant?
**First-Year Resume Sample**

**First Name Last Name**  
Room 123 MIT Dorm, 987 Institute Drive • Cambridge, MA 02139 • Phone: 617-xxx-xxxx • Email: Freshman@mit.edu

**Education**  
Massachusetts Institute of Technology (MIT)  
Cambridge, MA  
Candidate for Bachelor of Science in Biology  
June 2019  
Coursework includes: Calculus, Electricity and Magnetism.

Southtown High School  
Southtown, NS  
Valedictorian in class of 128 students; SAT 2260, ACT: 33  
May 2015  
Relevant Courses: AP Calculus, AP Statistics, AP Biology.

**Leadership**  
MIT Undergraduate Giving Campaign  
Cambridge, MA  
Class of 2019 Co-Chair  
November 2015

- Trained 12 members from the freshman class in fundraising activities, such as how to ask for a donation and how to properly document a donation.
- Organized a week-long schedule for the 12 members and myself to work at a booth to ask for donations.
- Achieved 31% participation within the freshman class, higher than that of the sophomores and juniors.
- Raised $1,250 from the freshman class for the MIT Public Service Center.

**Experience**  
High School Newspaper  
Southtown, NS  
Chief Editor  
August 2014-May 2015

- Proofread each article and authored two to three articles per issue.
- Printed one 24-page newspaper per month for 10 months.
- Overseaw staff of 14 students. Answered questions regarding articles and page design.

Assistant Editor  
August 2012-May 2013

Sports Editor  
August 2011-May 2012

Relay For Life  
W. Southtown, NS  
Team Captain  
April 2013

- Organized a team of 15 students for the Relay for Life.
- Coordinated fund raising efforts through the Beta Club, an organization for students with all A’s.

**Work Area**  
Supermarkets  
W. Southtown, NS  
Clerk and Bagger  
January 2013-May 2013

- Provided customer service to 100+ people per day. Bagged groceries and received cashier training.

Taco Bell  
W. Southtown, NS  
Team Member  
June 2012-January 2013

- Received cashier and food handling training, worked in a fast-paced environment, and experienced assembly-line teamwork. Served 100+ people per day.

**Activities & Awards**  
MIT Varsity Track & Field Team  
September 2015-Present  
Team Member, Pole Vaulting.

High School Varsity Athletics  
August 2011-May 2015  
Track and Field, Captain; Football, Team Member; Wrestling, Team Member.

STAR Student Award  
March 2014  
Awarded to the senior from each high school in Newstate with the highest SAT score.

Havoline Scholar Athlete Award  
December 2013  
Presented by The National Football Foundation and College Hall of Fame, Inc. to the top 40 scholar athletes in the state of Newstate.

**Skills**  
Computer: Microsoft Word, Excel and PowerPoint  
Carpentry: Framing, Masonry, Household Electrical Wiring, Flooring, Roofing, Plumbing.

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**First-Year Resume Sample**

**First Name Last Name**  
Room 123 MIT Dorm, 987 Institute Drive • Cambridge, MA 02139 • Phone: 617-xxx-xxxx • Email: Freshman@mit.edu

**Education**  
Massachusetts Institute of Technology (MIT)  
Cambridge, MA  
Candidate for Bachelor of Science in Managerial Science with a Concentration in Finance  
SAT: 2160, GPA N/A  
Current coursework: Differential Equations, Macroeconomics, Biology, Freshmen/Alumni Summer Internship Program (FASIIP)  
Relevant Courses: Multivariable Calculus, AP Calculus BC, AP Statistics, AP Biology

**Leadership Experiences**

**UROP: Diabetes Management Project**  
February 2016-Present  
Research Assistant  
Cambridge, MA

- Research different areas of diabetes management including aspects in both technology and lifestyle.
- Analyze qualitatively and quantitatively information from patient surveys.

**GRT Selection Committee**  
February 2016-Present  
Student Member  
Cambridge, MA

- Collaborate with 15 team members to dictate procedure on how to pick the next GRT.
- Conduct behavioral interviews for the candidates.
- Vote on which candidates will be considered.

**Mens Hall Executive Committee**  
December 2015-Present  
Treasurer  
Cambridge, MA

- Manage approximately $1,100 in club funds and reimburses the President’s expenses.
- Responsible for budgeting multiple club events, which provide customer satisfaction to all 45 participants.

**Procrastibaking Baking Club**  
November 2015-Present  
Treasurer  
Cambridge, MA

- Manage approximately $1,100 in club funds and reimburses the President’s expenses.
- Responsible for budgeting multiple club events, which provide customer satisfaction to all 45 participants.

**Robotics/Engineering Club**  
September 2012-June 2015  
Vp of Community Relations, Treasurer, Build Team Member  
Seaford, NY

- Raised $9,000 by pitching advertising packages to local businesses in order to fund the team.
- Presented projects to judges, which helped win the All Star Rookie Award and the Highest Rookie Award, resulting in the team going to Worlds.
- Coached new members on how to present themselves to businesses and judges.

**Work Experience**

**MIT Student Representative**  
September 2015-Present  
Student Representative  
Cambridge, MA

- Address student’s concerns about the application process through the phone and email, answering 100 questions per shift when deadlines are approaching.
- Cross expense reports to reimburse admissions counselors for their business expenses.

**TataComs Premiere**  
September 2014-August 2015  
Customer Service  
Seaford, NY

- Worked as a cashier, received food, phone, and cleaning training, worked in a fast-paced environment, while keeping impatient and hungry customers calm.

**Skills/Interests**

- Computer: Microsoft Word, Excel, PowerPoint, Basic Java
- Languages: Fluent in reading and writing Spanish, Proficient in Speaking Spanish
- Interests: Dancing, Lifeguards, Trying different types of food

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**Sample Resumes**

**First-Year Resume Sample**

**First Name Last Name**  
Room 123 MIT Dorm, 987 Institute Drive • Cambridge, MA 02139 • Phone: 617-xxx-xxxx • Email: Freshman@mit.edu

**Education**  
Massachusetts Institute of Technology (MIT)  
Cambridge, MA  
Candidate for Bachelor of Science in Biology  
June 2019  
Coursework includes: Calculus, Electricity and Magnetism.

Southtown High School  
Southtown, NS  
Valedictorian in class of 128 students; SAT 2260, ACT: 33  
May 2015  
Relevant Courses: AP Calculus, AP Statistics, AP Biology.

**Leadership**  
MIT Undergraduate Giving Campaign  
Cambridge, MA  
Class of 2019 Co-Chair  
November 2015

- Trained 12 members from the freshman class in fundraising activities, such as how to ask for a donation and how to properly document a donation.
- Organized a week-long schedule for the 12 members and myself to work at a booth to ask for donations.
- Achieved 31% participation within the freshman class, higher than that of the sophomores and juniors.
- Raised $1,250 from the freshman class for the MIT Public Service Center.

**Experience**  
High School Newspaper  
Southtown, NS  
Chief Editor  
August 2014-May 2015

- Proofread each article and authored two to three articles per issue.
- Printed one 24-page newspaper per month for 10 months.
- Overseaw staff of 14 students. Answered questions regarding articles and page design.

Assistant Editor  
August 2012-May 2013

Sports Editor  
August 2011-May 2012

Relay For Life  
W. Southtown, NS  
Team Captain  
April 2013

- Organized a team of 15 students for the Relay for Life.
- Coordinated fund raising efforts through the Beta Club, an organization for students with all A’s.

**Work Area**  
Supermarkets  
W. Southtown, NS  
Clerk and Bagger  
January 2013-May 2013

- Provided customer service to 100+ people per day. Bagged groceries and received cashier training.

Taco Bell  
W. Southtown, NS  
Team Member  
June 2012-January 2013

- Received cashier and food handling training, worked in a fast-paced environment, and experienced assembly-line teamwork. Served 100+ people per day.

**Activities & Awards**  
MIT Varsity Track & Field Team  
September 2015-Present  
Team Member, Pole Vaulting.

High School Varsity Athletics  
August 2011-May 2015  
Track and Field, Captain; Football, Team Member; Wrestling, Team Member.

STAR Student Award  
March 2014  
Awarded to the senior from each high school in Newstate with the highest SAT score.

Havoline Scholar Athlete Award  
December 2013  
Presented by The National Football Foundation and College Hall of Fame, Inc. to the top 40 scholar athletes in the state of Newstate.

**Skills**  
Computer: Microsoft Word, Excel and PowerPoint  
Carpentry: Framing, Masonry, Household Electrical Wiring, Flooring, Roofing, Plumbing.
Undergraduate Resume Sample

School Address: XXX Memorial Dr.
Cambridge, MA 02139

Home Address: Somewhere, MA

Jane Doe
soomone@mit.edu

Education

Massachusetts Institute of Technology (MIT) CAMBRIDGE, MA
Candidate for B.S. in Biology, GPA: 4.6/5.0
• Concentration in Management at Sloan Business School and Minor in Brain and Cognitive Sciences.
• Author of 5 publications in the MIT Undergraduate Research Journal and other peer-reviewed journals.

Experience

PUTNAM ASSOCIATES BURLINGTON, MA
Analyst
• Evaluated in 6-member team whether client’s marketing strategy for its $100M organ transplant drug effectively targets key decision-makers in transplant community. Client implemented proposed improvements in message content and delivery, designed to increase prescriptions for product by nearly 30%.
• Managed recruitment and interviewing process of 98 physicians to obtain primary data for marketing case. Analyzed data from interviews and secondary research in Excel/Access. Prepared PowerPoint deck for presentation to client.
• Analyzed past product switches from predecessor to successor drugs for independent project. Presented recommendations for future drug launches. Developed a database providing key criteria for launching various types of drugs.

MIT Programs on the Pharmaceutical Industry CAMBRIDGE, MA
• Designed, created, and tested a strategic model for the pharmaceutical industry that analyzes safety, efficacy, and economics to forecast (prior to clinical trials) which drugs will succeed on the market. Early elimination of inadequate drugs will significantly reduce the $800M spent to successfully launch a drug.

MERCK & CO., INC. RAYWAY, NJ
Pharmaceutical Laboratory Research Assistant, Infectious Disease Department
• Identified deficiencies in Type 2 Diabetes drugs on the market and screened chemicals on new cellular targets to develop an efficient drug without these shortcomings. Drug predicted to obtain substantially greater market share in the $1.4B and Type 2 Diabetes drug market compared to competitors.

MIT Center for Cancer Research CAMBRIDGE, MA
Academic Laboratory Research Assistant, Housman Laboratory
• Developed a product to recognize activity of a cancer-causing gene, aiding in discovery of drug for brain cancer. Engaged in all stages of product development: identification of market need, engineering of product, collaborating with industry for testing, production, and marketing of final drug.
• Designed a new sequencing technique that refines a common laboratory protocol. New procedure increases efficiency by 30% on average, reducing processing time by 25%, and creating more usable biological end-product.

Leadership

March of Dimes Birth Defects Foundation BOSTON, MA
Director of Massachusetts Youth Public Affairs
• Lobby federal legislators to encourage federal, Massachusetts, and California governments to develop public policies to improve the health of women. Introduced and promoted 10 Senate Bills, 4 of which have been approved this far.
• Represented Foundation on the Massachusetts State Public Affairs Committee.
• Organized conferences and fundraisers as a volunteer for the past 7 years (1999-Present).

JOURNAL OF YOUNG INVESTIGATORS CAMBRIDGE, MA
Science Editor and Science Journalist
• Managed 25 science journalists, delegated writing and editing tasks, and chose articles to print in monthly journal.
• Created daily digests about current science news, distributed to all science journalists.

Science & Consulting Business Club CAMBRIDGE, MA
Consulting Focus Group Organizing Committee
• Organized 6 campus-wide information sessions to educate students about careers in consulting and law.
• Selected and worked closely with speakers from diverse occupational backgrounds.

Awards & Interests
• Robert C. Byrd Scholarship, awarded to top 1% of U.S. students for academic excellence.
• Remsen Medal, awarded to top 20,000 students worldwide for achievements in mathematics and science.
• Interest in track & field, travel, photography, and oncology.
Christie Lee

Education
Massachusetts Institute of Technology, Cambridge, MA
- Bachelor of Science in Biological Engineering, GPA: 4.9/5, 2012-2016

Relevant Projects
- Back Bay Children’s Medical Center, 2014-2016
  - Developed a mobile app for tracking patient data
  - Created an interface for doctors to view and manage patient records

Skills
- Proficient in Python, Java, and MATLAB
- Experienced in web development (HTML, CSS)
- Strong writing and communication skills

Leadership & Service
- Volunteer Coordinator at a local non-profit organization
- Co-founder and President of a local community group

Interests
- Hiking, photography, traveling
- Passion for technology and sustainability

Contact Information
- Email: christie.lee@mit.edu
- Phone: 617-123-4567
- Address: 123 Main St, Boston, MA 02110

Global Resume Sample

MIT Student
522 Commonwealth Ave, Boston, MA 02215 • 333-111-2222 • travelingstudent@mit.edu

EDUCATION
- Massachusetts Institute of Technology • BS in Biological Engineering, GPA: 4.9/5, 2012-2016
- Sabanci Freshman Scholar, awarded visit to Sabanci University in Istanbul (2014)
- Foreign study at Universidad Politecnica de Madrid in Biotechnology (Spring 2015)

EXPERIENCE
- Undergraduate Researcher in Weiss Lab, MIT Synthetic Biology Center, Dec 2014 - Present
  - Developed a platform for biosensor development based on B-cell receptor
  - Awarded provisional patent (2014)
  - Presented poster at 2015 BioMAN Summit (Cell & Gene Therapy Manufacturing)

- Advisor for MIT iGEM 2015 team

- Intern in Rojas Lab (Instituto de Salud Carlos III), Madrid, Spain, Mar 2015 - Jun 2015
  - Investigated role of Srf1 in macrophages
  - Analyzed proteomics & microarray data to examine effects of spry2 mutations

- Development of a genetic circuit for Alzheimer’s disease treatment

- Undergraduate Researcher in Ploegh Lab (Whitehead Institute), Cambridge, MA, 2013-2014
  - Generated and purified VHIH fragments against glycolytic enzymes
  - Assayed effects of VHIH fragments on enolase & pyruvate decarboxylase function

- Undergraduate Research in Radiobiology (SCK-CEN), Mol, Belgium, 2013
  - Studied cancer pathology, radiation treatment, and space microscopy

- Cambridge Science Festival 2014

SKILLS
- Laboratory Techniques: Cloning, SDS-PAGE, Western blot, mammalian tissue culture, protein purification
- Programming: Familiarity with MATLAB, Python, and Java
- Proficiency in German, Spanish, and French
- Leadership & Service: President of the BioEgineering Society at MIT
- Stop Our Silence: Advisor for the organization's local chapter
- Freshman Associate Advisor: Mentoring first-year students in Biology
- Women in Science and Engineering (WISE): Mentor for high school students
- Member of the Alpha Phi Omega (Alpha Pi) Chapter

GCD-CON

Design Resume Sample

GCD-CON

Design Resume Sample

Global Resume Sample

GCD-CON

Design Resume Sample

Global Resume Sample

EDUCATION

Massachusetts Institute of Technology (MIT) – Cambridge, MA
Master of Engineering in Environmental Engineering 2014 (expected)
• Relevant Coursework: Strategies for Sustainable Business, Systems Dynamics, Sustainable Energy, Applications of Technology in Energy and the Environment, Design for Sustainability
Cornell University – Ithaca, NY
Bachelor of Science in Civil and Environmental Engineering 2010
• GPA 3.574/4.00 (Cum Laude), Chi Epsilon Honor Society
• Semester Abroad, University of Melbourne, Melbourne, Australia, 2004
• Relevant Coursework: Engineers for a Sustainable World, Sustainable Small-Scale Water Supplies, Solving Environmental Problems for Urban Regions

EXPERIENCE

Camp Dresser & McKee (CDM) – Cambridge, MA
Environmental Engineer 2010-2012
• Delivered sustainable technology assessment to compliment the campus's low-carbon design strategy. Presented findings to 50 employees through teleconference.
• Managed the design development of the utility system; wrote 4 chapters of 13 chapter report. Coordinated submittal of design report and associated CAD drawings.
• Facilitated a multi-discipline (6), multi-consultant (15) project team; led client, agency and subcontractor communications; developed technical reports and $300,000 budget; managed staff of lower grade levels.
• Technical lead for the evaluation of on-site deep heat geothermal energy, performed a cost analysis and carbon inventory. Wrote 5 of 8 chapters of the feasibility report.
• One of 15 chosen from 4,000 employees to be featured in the company’s annual report.

Sustainable Wastewater Treatment Plant Design
• Secured a Massachusetts Technology Collaborative (MTC) grant for the feasibility of converting fats, oils and greases to biofuels in jointly reduce a sewer system nuisance and the plant’s reliance on fossil fuels.
• Evaluated sustainable features for a wastewater treatment plant upgrade including an assessment of stormwater management, green building design and construction, and potential energy technologies targeted to reduce operating costs. Recommendations included in 30% project design submittal.

City of Salem Water Conservation Planning
• Developed water conservation recommendations and a comprehensive implementation plan for the city's Engineering Department.
• Recommendations embraced by the City Mayor. Presented findings to the community at a televised public meeting.

Sulabyia, Kuwait Wastewater Treatment Plant
• Evaluated the potential for innovative disposal options for reverse osmosis waste brine at the Sulabyia, Kuwait wastewater treatment plant.
• Specifically evaluated options for wetland treatment, saline farming, irrigation of turf fields, bioaerator landfill water source, phosphorus recovery, and deep well injection.

Engineers for a Sustainable World – Ithaca, NY/La 34, Honduras
Project Team Member
• Designed a water treatment plant for the small village of La 34, a farming community of approximately 100 families near the northwest coast of Honduras.
• Trained community members to self-sufficiently run the water treatment plant; plant is still operating successfully.

Cornell University – Ithaca, NY
Teaching Assistant/Laboratory Assistant
• Helped 40 students design, build and automate miniature water treatment plants using LabVIEW software.
• Facilitated a fluid mechanics laboratory including the setup and supervision of hydraulic experiments.

University of Southern California/Camp Dresser & McKee (CDM) – Los Angeles, CA
Sustainable Cities Undergraduate Fellow 2010
• Worked with diverse team of students, academic and professionals to incorporate urban sustainability into the development of a rapidly expanding Los Angeles School District school system.
• Recommended sustainable features adopted in a prototype environmental impact report.

CERTIFICATIONS AND SKILLS
• Engineer in Training, April 2010
• Hydraulic calculations using MathCAD
• Eligible for Professional Engineering Licensing Exam in 2014
• Water Distribution Modeling using H2OMap Water

Masters Resume Sample

CHARLES MENG
100 Charles St., Cambridge, MA 02139 (617) 123-4567 cmeng@mit.edu cmeng.github.io

EDUCATION
Massachusetts Institute of Technology (MIT) Cambridge, MA
Candidate for Master of Engineering in Computer Science; GPA 4.0/5.0
Expected June 2015
Bachelors of Science in Computer Science; GPA 4.0/5.0
June 2014
• Concentration: Human-Computer Interaction

EXPERIENCE
User Interface Design Group: CSAIL, MIT
Researcher Oct. 2013–Present
• Designing search tools to allow teachers to give qualitative feedback beyond “correct” or “incorrect” to tens of thousands of students’ code submissions.
• Building a search engine to increase efficiency of writing feedback to individual students.
• Developing techniques to cluster student code so teachers may grade multiple students’ code at once.

Assistive Technologies; MIT
Student leader Feb. 2014–Present
• Mentoring students in an MIT undergraduate course in which teams design and build assistive software, hardware, or mechanical devices for an individual in the community living with a disability.
• Founding member of MIT’s first assistive technology hackathon, a two-day event based upon the MIT course.
• Recruited five clients in the greater Boston area.

Introduction to Electrical Engineering and Computer Science: MIT
Teaching assistant to class of over 500 students Feb. 2014–Present
• Manage lab assistants. Lectured to over 100 MIT undergraduates at a review session.

Middle East Education Through Technology (MEET)
Curriculum developer May–July 2014
• Developed a 3-week curriculum to teach Israeli and Palestinian high-schoolers web programming and Django.

MIT International Science and Technology Initiative
Curriculum developer and instructor June–July 2013
• Established a new computer education class tailored to Mexican street children, independently developed curriculum, and taught class in Spanish.

The Server Labs
Software engineering intern June–Aug. 2012
• Created a user interface to facilitate clients setting up a cloud-based virtual environment.
• Presented project in Spanish before a group of cloud computing professionals.

Affective Computing; Media Lab, MIT
Undergraduate researcher June–Dec. 2011
• Introduced a user interface for CardioCam, a low-cost and non-contact technology that calculates heart rate and blood pressure using only webcam imagery.

SKILLS AND INTERESTS
• Django, WebDev Languages (HTML, CSS, Javascript, jQuery), Python, C++, Java, MATLAB
• Group leader for MIT Varsity Track and Field pole vaulters
• Spanish # Hebrew # Pole vaulting # Gymnastics # Travel # Music

Masters Resume Sample

CAREERS AND PROFESSIONAL DEVELOPMENT
Education
Relevant Coursework: Engineers for a Sustainable World, Sustainable Small-Scale Water Supplies, Solving Environmental Problems for Urban Regions

Experience
Camp Dresser & McKee (CDM) – Cambridge, MA
Environmental Engineer 2010-2012
• Delivered sustainable technology assessment to compliment the campus's low-carbon design strategy. Presented findings to 50 employees through teleconference.
• Managed the design development of the utility system; wrote 4 chapters of 13 chapter report. Coordinated submittal of design report and associated CAD drawings.
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Engineers for a Sustainable World – Ithaca, NY/La 34, Honduras
Project Team Member
• Designed a water treatment plant for the small village of La 34, a farming community of approximately 100 families near the northwest coast of Honduras.
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Cornell University – Ithaca, NY
Teaching Assistant/Laboratory Assistant
• Helped 40 students design, build and automate miniature water treatment plants using LabVIEW software.
• Facilitated a fluid mechanics laboratory including the setup and supervision of hydraulic experiments.

University of Southern California/Camp Dresser & McKee (CDM) – Los Angeles, CA
Sustainable Cities Undergraduate Fellow 2010
• Worked with diverse team of students, academic and professionals to incorporate urban sustainability into the development of a rapidly expanding Los Angeles School District school system.
• Recommended sustainable features adopted in a prototype environmental impact report.

CERTIFICATIONS AND SKILLS
• Engineer in Training, April 2010
• Hydraulic calculations using MathCAD
• Eligible for Professional Engineering Licensing Exam in 2014
• Water Distribution Modeling using H2OMap Water
Masters Resume Sample

Joe Resume

Phone: 617-253-XXXX
Email: XXX@mit.edu

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA

GPA: 5.0/5.0

Masters of Science in Computer Science and Mechanical Engineering

2013 (expected)

Indian Institute of Technology (IIT), Madras, India

Bachelor of Technology, Mechanical Engineering

GPA: 9.5/10.0

Class Rank 1. (Summa cum Laude) – secured a gold medal and three silver medals for overall excellence.

• Published papers on manufacturing process control in Journal of Manufacturing Technology and Management

• Standardized Test Score: GRE – Verbal: 720/800, Quantitative: 800/800.

RELEVANT SKILLS

Software: Excel spreadsheets including Sensitivity Analysis, Monte Carlo simulation, and modeling uncertainties; C++, Matlab, Saphe (probabilistic analysis tool), MS Word and MS PowerPoint.

Courses: Coursework covering fundamentals of finance, economics, statistics, risk-benefit and decision analysis, Options in engineering, and engineering math.

Projects: Simulated stock prices using Hidden-Markov-Models (Course - Statistics), researched system design-optimization techniques as part of a course portfolio (Course - Engineering Options).

EXPERIENCE

Olin Corporation, Boston, MA

Business Intern

2011 – Present

• Developed Excel spreadsheet model for valuation of the start-up’s revenue prospects over the next ten years.

• Collaborated with management team in researching and identifying market segments for the new product.

• Currently working on evaluating strategies to be adopted for market deployment and future expansion.

X Corporation, City, State

Part-time Consultant

2011

• Optimized and redesigned the system to reduce manufacturing costs by 40% and system size by 20%.

• Appraised final results of analysis to senior management at the client site and at MIT.

Center for Product Design, Indian Institute of Science, Bangalore, India

Intern for Program in Teaching Innovation

2010

• Delivered materials to professors and fellow students on issues concerning barriers to student learning.

• Identified and specified strategies aimed at teaching innovations and translated them into actionable objectives.

• Implemented a key objective by developing a flexible teaching tool for an advanced graduate course.

Bharat Electronics Limited, Bangalore, India

Technical Analyst

2009

• Analyzed a structural component and identified its critical design parameters.

• Redesigned and optimized the component.

LEADERSHIP

Chief Course Coordinator, MIT

– Formulated the syllabus and developed the course content for an undergraduate design engineering course. Organized lectures and led undergraduate assistants in conducting lab tutorials for 200 undergraduate students.

– Innovative Teaching, MIT: Formulated new teaching approaches as part of an HP sponsored focus-group trial.

– Community Service Officer, MIT: Planned and organized community events for fostering greater interactions amongst graduate students. Received Outstanding Officer Award for organizational excellence.

– Circulation Manager and News Reporter, Graduate Student News Magazine, MIT: Managed monthly distribution of 5000 copies of magazine on MIT campus. Popularized Cryptic Crosswords at MIT.

– Mentor, IIT Madras – Mentored 15 freshmen during the senior year at IIT Madras.

INTERESTS AND ACTIVITIES

Story-Telling ✶ Crypto-Crosswords ✶ Teaching Innovations ✶ News Reporting ✶ Tennis ✶ Piano

HONORS AND ACHIEVEMENTS

Government of India Fellowship (2006-2010) ✶ Certificates of distinction for National Math, Physics and Chemistry Olympiads ✶ Summa Cum Laude in high school ✶ Ranked in top 0.3% for IITs

PhD Resume Sample

JEAN UPEG

Political Economy Ave., Cambridge, MA 02139

Phone: 617-XXX-XXXX • Email: Upeg@mit.edu

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA

Candidate for PhD in Urban Political Economy and Governance

Fall 2013

Candidate for PhD in Urban Political Economy and Governance

Citation: out of Control? Local Democracy Failure and Fiscal Control Boards

Princeton University, Princeton, NJ

B.S.E., Civil Engineering with Architecture, summa cum laude

2006

EXPERIENCE

Community Innovators Lab, MIT, Cambridge, MA

Project Manager, “Innovation and Equity Transform America”; Research Assistant

2011-current

• Authored federal tax exemption, coordinated authors, and wrote abstracts for memos to the Presidential Transition Team.

• Drafted grant proposals and policy memos. Participated in designing a model for equitable and comprehensive retrofits.

• Currently collaborating with local and national labor and community groups on implementation.

Department of Urban Studies and Planning, MIT, Cambridge, MA

Teaching Assistant

2007-2011

• Conducted seminars, graded essays, and contributed to curriculum design. Classes taught totaled over 200 students and comprised a doctoral research seminar, undergraduate policy course, and three masters-planning courses. Conceived and taught graduate mini-seminar.

Brookings Institution, Washington, DC

Brookings Research Fellow

2010-2011

• Awarded first pre-doctoral fellowship for dissertation research granted by the Metropolitan Policy Program.

• Created a dataset compiled from government sources on municipal finances and socioeconomic. Programmed rare-events regressions to measure the impact of fiscal control boards in small cities. Performed qualitative case studies on the control boards of Miami and Washington, DC through interviews with key actors, archival research, and evaluating financial reports.

• Presented at two national academic conferences for Political Science (7,200 attendees) and Planning (1,000 attendees)

P3 Planning Practices Project, MIT, Cambridge, MA

Research Assistant

2008-2009

• Researched four medium-size cities and their innovative community planning organization. Profiled planners of small cities using national survey data. Created and maintained the project website.

Urban Institute, Urban-Brookings Tax Policy Center, Washington, DC

Research Assistant

2007-2009

• Analyzed tax policy using statistical programs (SAS and Stata), with a focus on the distributional impact of national legislation, the interaction of tax policies and valuation of fringe benefits, and state code relevant to low-income residents.

• Designed, launched, and maintained the Tax Policy Center website for press, policymakers, and researchers. Website received over 12,500 hits per day and was praised by Forbes, National Journal, and Business Week.

New York City Nonprofits Project, New York, NY

Research Assistant

2005-2006

• Developed a strategy to determine the economic impact of the non-profit sector on the city.

Brookings Institution, Washington, DC

Research Assistant

2005

• Wrote a memo detailing the spillover effects of non-profits and value of non-profit tax exemption, focused on Philadelphia.

Professor Julian Wolpert, Princeton University, Princeton, NJ

2005

• Wrote a memo detailing the spillover effects of non-profits and value of non-profit tax exemption, focused on Philadelphia.

Fellowships and Awards

National Science Foundation Graduate Research Fellow, 3 years (2009-2012); MIT Presidential Graduate Fellow and Department Fellowship, 3 years (2009-2012); civil and Environmental Engineering Book Award and David W. Carmichael Prize, Princeton (2006).

Professional and Public Service

Student representative, PhD Committee, Department of Urban Studies and Planning. MIT (2009-2011); Graduate Resident Tutor, MIT (2010-2011); High school tutor, Maya Angelou Public Charter School, Washington, DC (2010-2011); Tax preparer for low income households, Community Tax Aid (2008) and Lincoln Park Baptist Church (2008), Washington, DC

Publications and Conferences

2 first author; 10 co-author; 2 conference presentations; 1 first author manuscript under review (refereed).
PhD Resume Sample

Mechanical Engineering
1177 Mass Ave. • Cambridge, MA 02139 • Phone: 617-111-2222 • Email: nucheng@eecs.berkeley.edu

SUMMARY
Extensive experience with applying analytical and numerical methods (such as the finite element method) to model a broad range of systems from molecular structures to large-scale mechanical systems. Proven track record of creating and improving new computational methods to perform dynamic and static analysis of otherwise intractable engineering and biological systems. Strong ability to collaborate and work in a team environment on multi-disciplinary projects. Legally authorized to work in the United States (Green Card holder).

EDUCATION
Massachusetts Institute of Technology (MIT), Cambridge, MA, USA
Ph.D., Department of Mechanical Engineering.
• Thesis: “Contributions to the analysis of proteins” under the supervision of Prof. Jones and Prof. Smith
  • GPA: 5.0/5.0 (Awarded an A+ grade for all courses. Only one or two people in each course get A+-)
2011

Sharif University of Technology, Tehran, IRAN
M.Sc., Department of Mechanical Engineering.
• Thesis: “Online control of needle injection into soft tissue using the finite element method”
  • GPA: 18.62/20.0 (Ranked in top 5%)
2005

University of Tehran, Tehran, IRAN
B.Sc., Department of Mechanical Engineering.
• GPA: 17.68/20.0 (Class Rank: 2)
2003

SKILLS
• Computer: Commercial finite element software programs: ADINA (founded and owned by my Ph.D. and postdoctoral advisor, Prof. KJ Bathe), ABAQUS, ANSYS; Meshlab (a mesh processing program); MATLAB, Fortran, AutoCAD, molecular viewers: PyMOL, VMD, UCSF Chimera; CHARMM (a molecular dynamics program), Adobe Illustrator.
• Analytical: Finite element method; optimization; stochastic simulation: Langevin and Brownian dynamics simulation; statistical analysis; multi-scale modeling; atomistic modeling; continuum modeling; bioinformatics; biomechanics; computational biology; molecular biology; biophysics; solid mechanics; fluid mechanics; controls.
• Languages: English (fluent), Persian (native), Arabic (Basic).

EXPERIENCE
Department of Mechanical Engineering, MIT, Cambridge, MA, USA
Postdoctoral Associate
Oct. 2011–current
• Led project team that developed a coarse-grained finite element framework for the Brownian dynamics of macromolecular proteins that are inaccessible to available molecular dynamics algorithms.
• Created a model to calculate the diffusion coefficients and Brownian dynamics of DNA origami structures as part of a project in collaboration with researchers from MIT, Harvard, University of Michigan, Arizona State University, and Max Planck Institute. No other models are currently available.
• Member of team that developed a coarse-grained three-dimensional hydrodynamic model of semi-flexible filaments that resulted in several orders-of-magnitude reduction in computational cost.
• Collaborated with other engineers to improve a well-known implicit time-integration scheme that is widely used in engineering problems and in numerous commercial software tools. The improved version of the scheme has already been implemented in ADINA.

Department of Mechanical Engineering, MIT, Cambridge, MA, USA
Research Assistant
• Improved a widely used eigenvalue solver to substantially reduce the computational cost of calculating the eigenvalues of large-scale engineering and bioengineering systems. The improved version of the eigenvalue solver is currently used in ADINA.
• Made novel discoveries into the shape and function of complex proteins, the results of which have been included in the comprehensive government and research databases (such as the Protein Data Bank) and utilized by leading research companies.
• Developed a coarse-grained finite element framework for the diffusion coefficients of proteins.

Department of Mechanical Engineering, MIT, Cambridge, MA, USA
Teaching Assistant, “Finite Element Analysis of Solids and Fluids I” & “Mechanics and Materials I”
Fall 2007, Fall 2008, Fall 2010
• Prepped and presented lectures and recitations, supported term projects, helped students with course materials, and graded homework and

Mechanical Engineering
Page 2

Department of Mechanical and Aerospace Engineering, Ohio State University, Columbus, OH, USA
Teaching Assistant, “Thermodynamics I”
• Contributed to designing experiments for a new thermodynamics laboratory.

ITCN Co. (Industrial & Technical Consulting Engineers Company), Tehran, IRAN
• Designed the layout of production lines for a pipe manufacturer.

Department of Mechanical Engineering, Sharif University of Technology, Tehran, IRAN
Senior Engineer
• Performed compression tests on bovine liver and characterized its material properties using the genetic algorithm and the finite element method. Developed an algorithm to obtain the optimal path injection for the needle insertion into bovine liver for biopsy and brachytherapy purposes.

SAPCO Co. (Supplying Automotive Parts Company), Tehran, IRAN
Summer 2001; Summer 2002
• Analyzed newly designed and produced automotive parts using mechanical tests such as Engine Test, Material Strength Test, etc.

HONORS AND AWARDS
MIT Outstanding Student Graduate Award (2010). This award was given to the top two graduate students at the Department of Mechanical Engineering at MIT. The department has more than 500 graduate students; NSF Fellowship for the GEM4-2010 program (2010); Highly Distinguished Student of University of Tehran (1999–2003): A student who is in top 0.05% (out of ~500,000 applicants) in the national-wide university entrance exam and his/her semester GPAs are above 17 out of 20.

JOURNAL PUBLICATIONS

OTHER PUBLICATIONS
3 first-author journal abstracts; 14 conference papers.

ACTIVITIES
• Sports: Soccer; table tennis; swimming; hiking; mountain climbing.
• Music: Singing.
PhD Resume Sample

Ph.D. Interested in Consulting

RN. E39-305, M.I.T., 77 Mass Ave. • Cambridge, MA 02139 • Phone: 617-XXX-XXXX • Email: imoutou@mit.edu

Education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY Cambridge, MA

Candidate for Ph.D. degree in Material Science & Engineering, June 2014. Used stochastic simulation techniques to gain new insights into polymer structure. Established collaboration with experimental group in the Mechanical Engineering Dept. Pursuing unique integrated approach to develop new molecular models better suited to designing optimal industrial processes. GPA: 4.0/5.0

Minor: Business Administration at the Sloan School of Management, MIT


Master of Science in Chemical Engineering Practice, January 2009.

TRINITY COLLEGE, CAMBRIDGE UNIVERSITY

United Kingdom

Master of Arts with Honors in Natural Science and Chemical Engineering, June 2005

Class Rank: 2

Bachelor of Arts with Honors in Natural Science and Chemical Engineering, June 2005

Class Rank: 1

Experience

INDUSTRY INTERNSHIPS

MERCK PHARMACEUTICALS (Summer 2008)

West Point, PA

Team Leader: Found systematic method to raise glass transition temperature of vaccines. This allowed a higher storage temperature for the vaccines. Generated $1 million annual saving in refrigeration costs.

DOW CHEMICALS (Summer 2007)

Plaquemine, LA

Intern: Wrote software for simulating complex distillation processes, adopted throughout Dow Chemicals.

DOW-CORNING (September-November 2007)

Midland, MI

Team Leader: Removed a bottleneck to allowing doubling of a plant’s capacity. $10 million capital savings.

UNITED KINGDOM ATOMIC ENERGY AUTHORITY (Summers, 2001-2005)

United Kingdom

Intern: Worked for fluid mechanics groups on technical consulting projects for the petroleum industry. Frequent delivered presentations to clients. Incorporated new algorithms into pipeline simulation modules and achieved tenfold increase in speed. Developed strategies to reduce pipeline energy, improved reliability of flowrate measurement devices in oil pipelines to allow clients to better monitor throughputs.

Leadership

PRESIDENT, STUDENT LEADERSHIP COUNCIL OF MATERIAL SCIENTISTS (2011 - present)

Leader in group of 200 students that promotes collaboration between five major research universities. Organized videoconferences to allow students to share research ideas. Planning summer retreat to further student collaboration. Investigating ways to promote science and technology in secondary schools and the community.

STUDENT REPRESENTATIVE, MIT MATERIAL SCIENCE & ENGINEERING DEPT. STUDENT AFFAIRS COMMITTEE (2011 - present)

Leading student / faculty discussion on ways to enhance student / advisor interaction.

TEACHING ASSISTANT, MIT MATERIAL SCIENCE & ENGINEERING DEPT. (Fall semester 2010)

Organized tutorials to clarify course material. Wrote instruction manual to help students use math software. Class scored 97% higher in final than any of the professor’s former classes.


Awards, Honors


Student Scholarship, United Kingdom Atomic Energy Authority (2002-2006)

Activities

Dancing (MIT Salsa Club), Classical Guitar, MIT Debating Club. MIT European Club Soccer Team

Alum Resume Sample

Ph.D. Mathematics, Associate Director

SUMMARY

Accomplished strategy and finance professional with extensive experience in health care, financial services, energy, and education. Proven track record of improving client and firm performance across a broad range of corporate, not-for-profit, and government organizations. Strong ability to manage senior-level relationships and cross-functional teams.

EXPERIENCE

MIT MEDIA LAB, Cambridge, MA, 2012-Present

• Co-led development of virtual rehabilitation interface integrating clinical and home-based physical therapy.

• Interviewed clinicians to determine key specifications required for effective treatment in home and clinical settings.

• Collaborated on proposal that won $100,000 innovation grant to further develop technology.

XZY PUBLIC CHARTER SCHOOLS, Washington, DC, 2011

• Led development and launch of performance management system to improve operational and academic excellence of network of ten schools with over 5,000 students, 500 staff, and $70 million operating budget.

GLOBAL INVESTMENT FIRM, New York, NY and San Francisco, CA, 2009-2011

Senior Associate, Global Analytics

• Managed financial analysis and due diligence for over $52 billion in private equity financing for investment acquisition targets in transportation, energy, clean technology, and real estate sectors. Negotiated and oversaw contracts and relationships with engineering, real estate, accounting, and investment banking advisory firms.

• Evaluated strategic market opportunities in clean technology sector, including potential investments in wind turbine technology and carbon markets. Firm subsequently invested in several carbon reduction projects.

• Delivered presentations on strategic analysis, financial valuation, and due diligence of potential investments to Board members and senior executives of Babcock & Brown, portfolio companies, and prospective investment targets.

• Streamlined investment review process firmware, resulting in improved financial and risk analysis.

AN INVESTMENT BANK, New York, NY, 2002-2006

F.S. Economist, Associate Director

• Coordinated with retail and institutional investor sales force to increase distribution of U.S. economics research products that reached hundreds of thousands of clients. Advised large institutional investor clients on U.S. economics forecasts and research products and conducted customized client research.

• Managed launch of new research products from concept to distribution across sales channels. Led writing, production, and distribution of 200-page Data Decoder reference book, successfully positioned as flagship UBS research product and advised senior management on integration of remaining 150 PaineWebber Analysts.

WORLD BANK, Washington, DC, 2002-2003

Research Analyst, Development Economics Research Group

• Evaluated capital structure, and corporate governance of 4,000 firms in Indonesia, Korea, Malaysia, Philippines, and Thailand before and after 1997 financial crisis to inform policy response.

• Prepared reports and presentations of survey findings for senior government officials, global business leaders, senior World Bank officials, and international press. Organized conference in Bangkok for key Asian cabinet ministers and World Bank officials to discuss findings.

• Designed and evaluated randomized trials of education programs across 300 schools in Kenya. Led 10-person team in overhaul of data management process to improve accuracy and analysis of 20,000 student records.

EDUCATION

UNIVERSITY OF PENNSYLVANIA, Philadelphia, PA

Master of Business Administration, Major in Finance. August 2008

Graduate School of Education, Master of Science in Education, Major in Educational Leadership. May 2007

• Extensive experience in strategic planning and business development for organizations including Mastery Charter Schools, Victory Schools, School District of Philadelphia, and Association for Sustainable Economic Development.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, MA

Bachelor of Science, Major in Economics. June 2000. GPA: 4.5/5.0

ADDITIONAL INFORMATION

• Computer skills: Competency in Excel financial modeling, PowerPoint, Access, SQL, SAS, Windows, and Mac OS.

• Language: Written and spoken fluency in Spanish. Conversant in Mandarin Chinese.

• International experience: Worked in Chile, Peru, Mexico, Thailand, and Kenya. Studies for one year in Chile.
### Resume and Career Writing

**CV Guidelines**

A curriculum vitae (CV) is a summary of your experiences and educational background. While it can resemble a resume, a CV is most often used when applying for a teaching or research opportunities, applying for a grant or fellowship, or for further academic training. The process will be similar to the process of writing a resume, however, CVs are frequently longer and include much more detailed information.

Include the following relevant information in your CV:

- **Identifying Information**: Name, address, phone, and email.
- **Education**: In reverse chronological order, list your expected degree, previously earned degrees, majors, institutions, and dates of completion.
- **Dissertation**: Put the title and short description of your thesis.
- **Areas of Research Interest, Specialization, or Competence**: Here you will want to include any expertise or principal research and teaching interests.
- **Experience**: This is often divided into categories such as research experience, teaching experience, industry experience, and professional experience.
- **Fellowships, Awards, Honors**: Include date awarded and monetary amount if appropriate.
- **Memberships or Professional Affiliations**: List all positions held or memberships.
- **Languages**: List languages where you are proficient, fluent, or have basic skills.
- **Publications and Presentations**: Provide a full list of your authored publications and presentations.
- **Others**: This might include works in progress, references, or dissertation abstract.

Remember to tailor your CV to the position!

### Differences Between a CV and Resume

<table>
<thead>
<tr>
<th>Category</th>
<th>Curriculum Vitae</th>
<th>Resume</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is it?</td>
<td>A full list of your professional and educational history.</td>
<td>A selection of your experience and skills that are most pertinent to the advertised position.</td>
</tr>
<tr>
<td>How long is it?</td>
<td>May be many pages; length is not important.</td>
<td>Usually one page only for entry-level positions. Multiple pages may be appropriate for more advanced or research-oriented positions.</td>
</tr>
<tr>
<td>When do you use it?</td>
<td>Used for academic positions and research positions in government and industry.</td>
<td>Used for every other type of job outside of academia and research science.</td>
</tr>
<tr>
<td>Do you include your publications?</td>
<td>A full list of publications is essential.</td>
<td>Even a partial list of publications is rarely included.</td>
</tr>
<tr>
<td>How important is style and layout?</td>
<td>Content is what matters most. As long as material is clearly presented, style doesn’t matter that much.</td>
<td>Style and content are both important. Bad style is a liability.</td>
</tr>
<tr>
<td>Are references listed?</td>
<td>Typically references are listed at the end of the CV.</td>
<td>References are not listed on a resume. If requested, you may submit a separate list of relevant references.</td>
</tr>
</tbody>
</table>

Reprinted with permission from Peter Fluke.
You will have to write a number of letters to employers while looking for a job. One type of letter is the cover letter, which you send with your resume when you are requesting a job interview. Other letters are those you write following up interviews, arranging company site visits, and accepting or rejecting job offers. See the examples on the next pages. Here are some tips:

- State clearly in your opening sentence the purpose for the letter. Then use the rest of the letter to support your candidacy.
- Be sure that each cover letter is specifically tailored to the company to which you are writing. Research the company to help you determine your approach. Check the company’s website and other resources on the Internet.
- If you are seeking a position in a field or industry that does not have an obvious parallel or connection to your academic training, for example, you are an electrical engineer who wants to use his/her quantitative skills in a finance or consulting position—be explicit about why you are interested in that particular field, organization or job, and what value you bring.
- Do not leave the reader wondering, “Why is an electrical engineer writing to me, the personnel manager of McKinsey?”
- If you are applying for a summer job and do not yet have any experience that is directly related to the position, focus on telling the employer what experience you do have that may be of interest.
- Always try to write to a specific individual and include their job title. Do not address your letter to “Dear Sir or Madam.”
- Ask someone else to check your grammar, spelling, and style. When proofreading your own writing, it is easy to overlook silly mistakes.

### Suggested Formula for Cover Letter

#### September 1, 2018

Mr. John Doe  
College Relations Coordinator  
Technology Corporation, Inc.  
11 Beacon St., Suite 7  
Boston, MA 02134

Dear Mr. Doe:

First Paragraph: Introduce yourself by stating your degree program and the year in which you will graduate. Specify the type of position you are seeking (e.g., summer internship, full-time position). Tell why you are writing, and name the position, field, or general vocational area in which you are interested. Tell how you heard of the opening or organization (e.g., the job posting on MIT’s CareerBridge, the career section of the company’s website, or through a faculty recommendation).

Second Paragraph: Mention one or two qualifications you think would be of greatest interest to the employer. Illustrate these qualifications by describing experiences where you demonstrated these skills. Tell why you are particularly interested in the company, type of work, or location. If you have related experience or specialized training, point it out.

Third Paragraph: Close by stating your desire for an interview. You may say that you will call in a week or so to request an appointment. Make sure that your closing is not vague, but makes a specific action from the reader likely.

Sincerely,

Jane Doe
Jane Doe
XXX Memorial Drive
Cambridge, MA 02139
janedoe@mit.edu

Navigant Consulting
125 High Street
Boston, MA 02110

September 15, 2018

Dear Campus Recruiter:

I am a senior at MIT majoring in biology with a concentration in management from Sloan Business School. I was extremely impressed with Deloitte’s approach to consulting after speaking with Yelena Shklovskaya. Deloitte is unique in having the ability to form diverse teams to tackle all the problems a client may have. As a member of the Strategy & Operations group, I may have the opportunity to meet and work with a variety of people in this consulting group, in other areas of consulting, and outside of consulting as well. In particular, I like the amount of attention and dedication that Deloitte puts into working with its clients, not only by devising effective strategies to address the clients’ problems, but also by often implementing the recommendations on-site. Therefore, I am very interested in the Business Analyst position with Deloitte.

In the past two years, I have been involved in strategy consulting, pharmaceuticals, and government affairs for a non-profit healthcare organization. This summer, I worked in strategy consulting for Putnam Associates. My 6-member team evaluated the marketing efforts for a major pharmaceutical company’s organ transplant drug. Through my management of recruitment and interviews with 98 physicians, I obtained primary research and analyzed it on national and regional levels to recommend and help implement improvements in the client’s marketing plan. I learned how to work in a deadline-oriented environment, held responsibility for large segments of a team project, and enhanced my quantitative skills through analysis of primary and secondary research data. In addition, I conducted independent research to form recommendations when launching a drug that follows a related product, and I presented these key considerations to all Putnam employees.

I have been a volunteer in public policy for 7 years with the March of Dimes Birth Defects Foundation. I lobbied Senators at both the Massachusetts and California State Capitols, as well as on Capitol Hill in Washington, D.C. Lobbying has taught me negotiation skills, the need for contingency plans, and the ability to make quick yet innovative decisions. Two years ago, I was appointed Director of Massachusetts Youth Public Affairs and asked to be a member of the state’s Public Affairs Council. My responsibilities include developing, organizing, and implementing the Foundation’s annual public policy objectives in an ultimately results-driven environment.

Through my experiences at Putnam Associates and the March of Dimes, along with my modeling work in the MIT Sloan Business School, I used my management skills to negotiate and consult with others, analytically design a successful plan, and execute my ideas. I am confident that I can bring my strong, diverse technical and business background to best fit the current needs and future ventures of Deloitte.

I welcome the opportunity to speak with you about my qualifications and ways that I can contribute to Deloitte. Thank you and I look forward to hearing from you soon.

Sincerely,

Jane Doe
February 18, 2019

Raytheon Company
Integrated Defense Systems
50 Apple Hill Drive
Tewksbury, MA 01876

Dear Hiring Manager,

I am a recent graduate of MIT with a Bachelor of Science degree in Mechanical Engineering with a concentration in Engineering Management. I recently spoke with a Raytheon recruiter at MIT’s xFair in February to discuss potential mechanical engineering related opportunities. I admire Raytheon’s commitment to defense and security through the use of innovative technologies. With the combination of my engineering and management educational experiences, in addition to my work experience, I believe that I would make a great fit for the Systems Engineer position.

During my internship with Airbus working with fluid mechanic technology I evaluated wind tunnel and flight test data in order to reduce external airframe noise emissions. The analysis that I conducted involved examining data under varying flight conditions and extracting useful information. At the conclusion of my internship, I was able to provide my group with recommendations for improving the model scale testing in the wind tunnel to make better predictions for the flight test outcomes. My work was part of the group’s task to provide continual improvements to the company’s commercial aircraft. I would be excited to use my analytical skills to improve hardware systems, especially early in their life-cycle at Raytheon, when recommendations can have a high impact and positive result for the end user.

In addition to work experience, I have also practiced systems engineering in my coursework. Through my Optimization Methods in Management Science course I collaborated on a group project to optimize the constraints of a utility company in order to make residential demand response for the utility company a cost-effective tool. I specifically helped evaluate how transmission and distribution costs would incur through the implementation of a demand response program. This position helped me improve my communication and teamwork skills while delivering a project in a timely manner.

I am very excited about the work of Raytheon and welcome the opportunity to speak with you further about career opportunities at Raytheon and how I can contribute. Thank you for your time and consideration.

Sincerely,

MechE Student

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Sample Faculty Cover Letter

August 25, 2018

Professor XXXX
Search Committee, IT 989
Department of Mechanical Engineering
University of XXX
Address
City, State Zip

Dear Professor XXXX:

I am responding to your advertisement for a faculty position in the Department of Mechanical Engineering at University of XXX. I graduated from the Department of Aeronautics and Astronautics at MIT in June with a doctorate, and am currently working as a Postdoctoral Associate at MIT in the Department of Aeronautics and Astronautics. My thesis work is in the area of active structural acoustic control using smart structures technology, and my specific research topic is the development of a new wavenumber domain sensing method for active structural acoustic control. My thesis advisor is Professor X in the Department of Aeronautics and Astronautics at MIT.

For my Ph.D. dissertation, I have worked on the development of the structural-acoustic control algorithms and their implementation for the reduction of radiated noise from vibrating underwater vehicles. The Office of Naval Research, with an objective of developing “smart” underwater vehicle systems so that the enemy cannot detect their attack in advance, has funded this project. My responsibility in this project is to develop the new technology to reduce the radiated noise from vibrating underwater vehicles. In order to accomplish this, I have developed a new wavenumber domain sensing method and applied it to the real-time estimation of acoustic power and the design of feedback controller for active structural acoustic control of the general complex structures. Furthermore, I have designed and experimentally implemented local and global controller architectures with different configurations to find the best controller configuration for the new underwater vehicle system.

I would like to continue my research on active structural control and active structural acoustic control for complex systems, including aerospace systems (aircrafts, helicopters) and underwater vehicles (submarines, torpedoes). I will carry out research on structure/fluid/control interaction phenomena and advanced sensor/actuator development using smart structures technologies. Also, I will extend my research to the development of advanced control design techniques for noise and vibration reduction of complex systems.

My ultimate research goal is to develop “intelligent structural systems”, which will contain arrays of sensors and actuators, and embedded devices for controls and decision-making algorithms, so that those systems can coordinate large numbers of devices and adapt themselves to uncertain environmental changes in an intelligent manner. I believe my extensive research experience and specialization in structural dynamics and controls will allow me to continue my research in those areas.

I have enclosed my curriculum vitae with a list of publications, and a list of references. If you have any questions or would like to talk with me, I can be reached by phone at 617-XXX-XXXX or email at sample@mit.edu. Thank you for your consideration. I look forward to hearing from you soon.

Sincerely,

Your Name
Other Career Writing

Request for Informational Interview

Dear Ms. XXX:

Professor XXX, a faculty member in the Electrical Engineering and Computer Science department at MIT, suggested I contact you. I have been meeting with Professor XXX as a means of exploring the field of Speech Systems Technology as a potential career option.

He thought you would be a great resource to help me gain insight into the field and focus my job search efforts. I realize your time is very valuable so I would be very grateful if you would be willing to speak with me briefly (20 minutes) at your convenience. I would very much enjoy a chance to ask you some questions.

I have enclosed my resume for your review. I thought it might be useful as a way of informing you of my educational background and experience. I can be reached at mitstudent@mit.edu or (xxx) xxx-xxxx, or if you prefer I would be happy to contact your office within 10 working days to follow up with this letter. Thank you in advance for your time and effort.

Sincerely,

Your Name

Requesting to Reschedule an Interview Due to an Academic Conflict

Dear Ms. Harper:

Thank you for the invitation to participate in a site visit at your Seattle headquarters. The opportunity to visit, meet staff and learn more about the opportunities at Javentus is exciting; however, the dates provided for the site visit conflict with my academic commitments. In conjunction with my professors, I have identified other dates in March that I would be available to visit Javentus. Would rescheduling be possible?

Please know that I am extremely interested in the Developer position and working at Javentus. I hope another suitable date for a site visit might be able to be arranged. I look forward to hearing from you but will also be in contact by the end of the week to see if rescheduling might be possible.

Sincerely,

Your Name

Thank-You/Follow-Up Email

Dear Mr. Smith,

It was a pleasure speaking with you and Mr. Mansfield yesterday, regarding job opportunities at Supa Systems. I am very interested in the work you are doing and am extremely impressed with the advanced applications being used in your company. As I mentioned during our conversation, my past two summer positions were related to the development and design of software programs for industrial computer vision experiments. With my skills and interest in software design, I believe I could be of value to Supa Systems. Thank you for your time. The interview was very informative. Please let me know if you need any more information about my background. I look forward to hearing from you.

Sincerely,

Your Name

Letter Declining a Job

Dear Mr. Smith,

I am writing to thank you for the offer to join Northeast Electronics Laboratories as a member of the research and development staff. Unfortunately, I must decline your offer. I have accepted a position with another company.

It was a difficult decision for me because I was both excited and impressed by the work at Northeast Electronics. I appreciate you giving me the opportunity to meet with you and the members of the research staff.

Again, thank you for your time.

Sincerely,

Your Name

Correspondence to Begin Job/Internship Negotiation Process

Dear _________________:

First Paragraph: Express gratitude for the internship or job offer, including position title and department. Indicate how much the position, team, projects or company interests you.

Second Paragraph: In brief, share any questions about the offer that you would like to discuss with the employer over the phone if possible. For example, you may need more time to make a decision because of upcoming interviews, site visits, or other offers to consider. Indicate your need for more time, and the date by which you would be comfortable making a decision. Consider sharing MIT recruiting policies with the employer.

(Note: Although we request that all employers provide students with adequate time to make a decision, they are not always able to meet the exact deadlines requested. However, a compromise that is agreeable to both parties is often possible.)

Third Paragraph: Thank the employer again for the offer and for their time. Acknowledge that you understand the recruiting process is a very busy time for the employer. Ask if it would be possible to schedule a time to discuss the offer further, and provide several blocks of time during which you could give them a call. Keeping the employer’s time zone in mind, try to offer them options within standard business hours of 9am to 5pm.

Sincerely/Thank you,

Student Name
General Structure of Interviews

Types of Interviews
- Phone
- Video/Skype
- Face-to-Face at MIT
- Face-to-Face at Employer Site

Style of Interviews
- Behavioral
- Technical
- Case

Typical Interview Structure
- Greeting/small talk
- Interviewer questions and mutual discussion of your background and credentials as they relate to the needs of the employer
- You ask questions
- Wrap-up/discuss next steps in the process

Know the Policies for On-Campus Interviewing
- Interviews are generally conducted at the CAPD office (E17-294). When you arrive, sign in and wait for the employer to greet you.

Employer Rated Need of the Career Readiness Competencies

<table>
<thead>
<tr>
<th>Competencies</th>
<th>Weighted Average Rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking/Problem Solving</td>
<td>4.62</td>
</tr>
<tr>
<td>Teamwork/Collaboration</td>
<td>4.56</td>
</tr>
<tr>
<td>Oral/Written Communications</td>
<td>4.30</td>
</tr>
<tr>
<td>Leadership</td>
<td>3.82</td>
</tr>
<tr>
<td>Digital Technology</td>
<td>3.73</td>
</tr>
<tr>
<td>Career Management</td>
<td>3.46</td>
</tr>
<tr>
<td>Global/Multicultural Fluency</td>
<td>3.01</td>
</tr>
</tbody>
</table>

*5-point scale, where 1=Not essential, 2=Not very essential, 3=Somewhat essential, 4=Essential, 5=Absolutely essential; Source: Job Outlook 2018, National Association of Colleges and Employers

Interviewing Tips

1. Research the organization
   - Know what they do and where they do it.
   - Find out what you can about your interviewer before the interview.

2. Practice in at least one mock interview
   - Make an appointment with a counselor at CAPD through CareerBridge.
   - Supplement mock interview with InterviewStream online.

3. Make a strong first impression
   - Dress appropriately and conservatively.
   - Arrive 10 minutes early. Plan for commuting delays.
   - Address the interviewer by his/her title (e.g. Dr. if appropriate).
   - Offer a firm handshake.
   - Maintain good eye contact and smile.
   - Avoid heavy cologne and perfume. Some people are very sensitive to smells.
   - Don’t ask about salary/benefits unless the employer brings it up first.

4. Keep your responses focused and use your STAR examples (see page 60)
   - Keep your answers to 2-3 minutes, unless you are asked to elaborate further.
   - Prepare examples ahead of time (STAR: Situation, Task, Action, Results).

5. Quantify and be specific
   - Generalities rarely impress.
   - Specific and quantifiable responses are the most compelling.

6. Summarize at the end of each answer as to how you approach that type of situation
   - Consider stating something like ‘So in general, when I have to interact with a difficult coworker, I...’
   - This leaves the interviewer with the take-home message that you want him/her to remember.

7. Be clear on how you fit the job opening; convince them with examples that you could be a valuable team member

8. Express appreciation for the opportunity to interview
   - Thank the interviewer and ask about next steps.
   - Give a firm handshake before you leave.
   - Send a follow-up thank-you email or note.
Behavioral Interviews

Behavioral interviewing is a technique used by employers in which the questions asked assist the employer in making predictions about a potential employee’s future success based on past behaviors. In behavior-based interviews, candidates are asked to give specific examples of when they demonstrated particular behaviors or skills.

Effective Formula for Answering Behavioral Interviews

S: Describe the Situation you were in
T: Describe the Task you needed to accomplish
A: Describe the Action you took
R: Describe the Results of your experience

Use the STAR Formula to Prepare Examples for the Interview

<table>
<thead>
<tr>
<th>Skill</th>
<th>Your STAR Story</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situation:</strong></td>
<td><strong>Task:</strong></td>
</tr>
<tr>
<td>Teamwork</td>
<td>Task</td>
</tr>
<tr>
<td>Decision Making</td>
<td>Task</td>
</tr>
<tr>
<td>Persuasion</td>
<td>Task</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>Task</td>
</tr>
<tr>
<td>Time Management</td>
<td>Task</td>
</tr>
<tr>
<td>Multitasking</td>
<td>Task</td>
</tr>
<tr>
<td>Leadership</td>
<td>Task</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>Task</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Task</td>
</tr>
<tr>
<td>Goal Setting/Achievement</td>
<td>Task</td>
</tr>
<tr>
<td>Creativity</td>
<td>Task</td>
</tr>
<tr>
<td>Conflict Management</td>
<td>Task</td>
</tr>
</tbody>
</table>

Adapted with permission from Virginia Tech’s Career Planning Guide.

Case Interviews

Certain employers—especially management consulting firms—use a "case interview" technique to determine how well-suited you are to performing their type of work. Case interviews are used to measure your problem-solving ability, your tolerance for ambiguity, and your communication skills.

Potential Components of Case Interviews

- Brainteaser
  - Can be little or complex logic puzzles
  - Can involve quick math and give you a chance to demonstrate your conceptual skills
  - Examples include:
    - "Why are man-hole covers round?"
    - "If a wall clock reads 3:15 pm, what is the angle between the hour and the minute hands?"
    - "How would you weigh a plane without a scale?"

- Estimation Question
  - May be longer than brainteasers
  - May require you to be adept in making assumptions and working with numbers, facts, and the unknown (usually you will need pencil and paper)
  - Examples include:
    - "How many car batteries are sold in the U.S. each year?"
    - "How much does all the ice in a hockey rink weigh?"
    - "Approximately how many pharmacies exist in the U.S.?"

- Project Case
  - May be written or verbal and take 45 minutes or longer
  - Practice is important; some firms will have sample cases
  - Examples include:
    - "You are called in by Pizza Hut to help them develop a strategy for the home delivery market in which Domino’s has the dominant position. As lead consultant, what would you do?"
    - "Your client is a mid-sized hotel chain. How would you develop a pricing strategy for the client?"
    - "A U.S. company is considering expanding internationally. If its labor costs are competitive, what issues might influence its decision?"

What Employers Look For
1. Enthusiasm and ability to think out loud and brainstorm
2. Listening skills, pace of your response, ability to restate the problem, focus
3. Use of sketches, charts, diagrams to describe your logic
4. Ability to summarize final recommendations in a clear and concise manner
5. Confidence

What Employers Look For
1. Enthusiasm and ability to think out loud and brainstorm
2. Listening skills, pace of your response, ability to restate the problem, focus
3. Use of sketches, charts, diagrams to describe your logic
4. Ability to summarize final recommendations in a clear and concise manner
5. Confidence

Common Mistakes
1. Ignoring cues of the interviewer; asking open-ended questions throughout the entire interview
2. Making poor assumptions and being disorganized
3. Spending too much time on smaller aspects and not referring back to the big picture
4. Not responding well to criticism or questions about your assumptions or your solutions

Additional Resources
1. Practice cases on the websites of large consulting firms
Interviewing and the Job Offer

Technical Interviews

Technical questions help an employer decide whether or not you have the skills necessary to complete your day-to-day work. The technical questions asked should reflect the experience you've put on your resume, so, in a sense, this is an employer's verification of what you've listed on your resume. Technical questions can incorporate drawing and sketching, coding, or even a written test.

Refresh your technical skills
- Read your resume and make sure you are comfortable with the skills you've listed
- If you state you are an expert in something, be prepared to be asked expert-level questions
- Find sample technical questions and practice

Mentally prepare
- Research the job description and make sure you brush up on the required skills
- Read more about technical interviews so that you are comfortable with the process
- Practice the points you want to get across

Communicate clearly
- Think out loud and describe your assumptions as well as the test cases you will use
- Sometimes getting to the right answer isn’t as important as having your interviewer understand your thought process or approach to the question

Be prepared to sketch or write on a whiteboard
- Practice this so that it feels natural in case it is necessary
- Remember a simple solution is better than a complicated one

Ask clarifying questions
- Interviewers expect you to ask for clarification on ambiguous instructions, just as you would in a work environment
- This can show them that you understand what else you need in order to solve a problem.

Take their advice
- If you are offered a suggestion, take it or offer a very good explanation for why you don’t think it would work.
- Show them you can work collaboratively.

Consider bringing in a portfolio of your work
- A notebook with code or designs can highlight your skills

Have a closing statement in mind
- Express enthusiasm for the role
- Let the interviewer know why you are the right person for the job

Send a thank-you note

Video and Phone Interviews

Video Interviews

- Set up your video conferencing system in advance and test it with a friend. Make sure you are comfortable troubleshooting should that occur.
- The camera should be at the same height as the top of your head. You look better when the camera looks down slightly towards you.
- Do not wear tinted glasses. Anti-glare coatings are highly recommended for clear lenses so the viewer can see your eyes.
- Look directly into the camera, not the image of the interviewers. This is tough to do, so you should practice with a friend. Put a sticky arrow pointing at the camera if that helps you remember. Making eye contact is critical for conveying trustworthiness.
- Use good posture, as if you are in the same room with the interviewer.
- Beware of your background. The simpler the background the better.

Phone Interviews

- Make sure you have a good signal and charged battery if using a cell phone.
- Have a “cheat sheet” of compelling story topics that highlight your accomplishments. Do not, however, write out answers ahead of time, so that your responses remain natural.
- Have your resume in front of you. If the interviewer references it, you can easily respond.
- Consider having key words at hand such as strengths and weaknesses. This may make it easier to respond.
- Consider printing out the job description and highlight key attributes so you can remember to reference relevant skills.
- Have a pen and paper handy for taking notes, and a glass of water.
- Speak clearly into the phone.
- Get the interviewers names ahead of time so you know to whom you will be speaking. Look them up if possible.
- Dress so that you feel confident, even though they can’t see your clothing.
- Have a short list of questions about the job and organization.

General Tips

- Prepare as you would for a behavioral interview (see page 60).
- Find a quiet place for the interview where you won’t be disturbed.
- Place a sign on the door “Interview in progress—please do not disturb” and close the door.
On-Site Interviews

Lead candidates are often invited for an on-site interview.

Set Up Your Travel Plans
- Familiarize yourself with the location; determine travel times and plan for unforeseen circumstances so that you arrive 10–15 minutes early.
- If you plan the trip yourself, keep ALL receipts for reimbursement.
- If the employer plans the trip, get a detailed itinerary with the contact info of the person who made the arrangements.

Mentally Prepare
- Plan for a long day of interviews. When you arrive you will likely be given your interview schedule with the names and titles of individuals. Keep this agenda with the names and titles of all those you will meet. Be prepared for your interview because you will want to send individuals. Keep this agenda with the names and titles of the people you will meet. Be prepared for your interview because you will want to send info of the person who made the arrangements.

Bring What You Need
- Copies of your resume
- A leather folder with a notepad, a good pen
- Tissues

Interviewing (also while eating)
- Make sure to use proper dining etiquette! Choose something easy to eat and do not order alcohol, even if over 21.
- Keep smiling and keep your energy and enthusiasm up. It is a long day but it is important to make a great impression throughout the day.
- Be sure to thank each interviewer for his/her time.

Human Resources Department Interview
- Ask final questions; they will let you know next steps.
- Do not expect an offer at this time. If you do receive a verbal offer, you do not have to accept it then. Thank them and let them know that you are not prepared to make a decision. Ask for a written offer and the timeframe for a response.

Education and Experience
- Describe your most rewarding accomplishment since you’ve started college.
- Tell me about the most satisfying job you’ve ever held. The least?
- What kind of boss do you prefer?
- What frustrates you on the job?
- How would a former supervisor describe your work?

Career Ambition and Plans
- What are your long-range and short-range goals and objectives?
- What qualities does a successful manager possess?
- What qualities does a successful team player possess?
- What kind of challenge are you looking for?
- What do you think determines a person’s progress in a good company?
- What are your ideas on salary?
- What personal characteristics are necessary for success in your field?
- Do you prefer to work on your own or under a supervisor?

Personal Assessment
- Tell me about yourself.
- What are your greatest strengths and weaknesses?
- Give me an example of when you showed initiative.
- Describe your ideal job.
- Define success. Define failure.
- What can you offer us?
- What motivates you to put forth your greatest effort?
- Tell me about a leadership role you have had. What makes a good leader?
- Where do you want to be in 5 years? Ten years?

Behavioral Questions
- Tell me about a time when you had to deal with someone whose personality was different from yours.
- Give me a time where you had to carry out a directive with which you did not agree.
- Describe a time when you saw a problem and took action to correct it rather than waiting for someone else to do so.
- Tell me about your most successful presentation and what made it so.
- Tell me about a situation in which you had to be relatively honest answer. The question is intended to force you to react under some stress and pressure.
- Name five uses for a stapler without staples.
- Do you prefer cats or dogs?
- If you could be a superhero, which would you be and why?
- Do you have any other questions?

Unexpected Questions
- You may get an unusual question. Stay cool, think, and give an honest answer. The question is intended to force you to react under some stress and pressure.
- If you could be a superhero, which would you be and why?
- Do you prefer cats or dogs?
- Name five uses for a stapler without staples.
- How would you describe making an omelet to someone who has never made one before?
Sample Questions to Ask an Interviewer

You are expected to have several questions to ask your interviewer(s) when they give you the opportunity, usually towards the end of the interview. Make sure your questions are respectful and reflect well upon you as a candidate. Below are some possible questions you could ask. Remember that the interviewer is the driver of the interview so you should not dominate it; however, a few well-thought-out questions lets the interviewer know you are fully engaged and interested in the role.

The Position
- Would you describe the duties of the position for me, please?
- Can you tell me about the primary people with whom I would be working?
- What skills do you see as most important in order to be successful in this position?
- To whom would I be reporting?
- What kinds of assignments might I expect the first six months on the job?
- How and when would my performance be evaluated?
- Can you tell me about the people who would be reporting to me?
- Is this a new position or am I replacing someone?
- May I talk with the last person who held this position?

Career Paths
- Can you tell me about the career path this position offers?
- What is the growth potential in this role?
- Are they now and what are they doing?
- Is it your usual policy to promote from within?

How are promotions or transfers determined within the company?
- What are your projections for this department/position for the next year? (specify type of projections e.g. sales, production, products, profits)
- What kind of personal attributes and qualifications does your company value?
- What characteristics are important for this position?
- What is the most significant challenge facing your staff now?
- What are your plans for expanding the (sales, audit, research, etc.) department?

Education and Training
- What additional training might be necessary for this position?
- Is training done in a classroom/group session or is it handled on an individual basis?
- Are there training programs available to me so that I can learn and grow professionally?
- What type of on-the-job training programs do you offer?
- Does the firm support further college education for its employees?

Assessment Questions for Interviewer
- What are your projections for this department/position for the next year? (specify type of projections e.g. sales, production, products, profits)
- What kind of personal attributes and qualifications does your company value?
- What characteristics are important for this position?
- What is the most significant challenge facing your staff now?
- What are your plans for expanding the (sales, audit, research, etc.) department?

General Questions for Interviewer
- Can you tell me a little about your own experience with the company?
- What do you like best about your job/company?
- Are you happy here?
- If you could change one thing about the company, what would it be and why?
- When do you expect to make a hiring decision for this position?
- Could you describe the hiring process?
- Is there anything that we have discussed today that would give you concern regarding my candidacy?
- In what ways is a career with your company better than one with your competitors?
- What is the largest single problem facing your staff (department) now?
Choosing Between Offers

Rate the level of importance to you of each factor first. Then rate each offer on a scale of 1 – 10. Multiply the level of Importance factor by the Job score and insert in the appropriate column. Total and compare.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Importance (1 – 10)</th>
<th>Job A (1 – 10)</th>
<th>Importance x Job A</th>
<th>Job B (1 – 10)</th>
<th>Importance x Job B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job content</td>
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<tr>
<td>Creative &amp; challenging work</td>
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<td>Fit with culture &amp; environment</td>
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<td>Opportunity to make an impact</td>
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<td>Decision-making authority</td>
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<td>Opportunity for career advancement</td>
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<td>Fit with my experience &amp; skills</td>
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<td>Training/educational opportunities</td>
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<td>Job flexibility, work/life balance</td>
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<td>Supervisor and colleagues</td>
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<td>Support from management</td>
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<td>Title</td>
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<td>Other:</td>
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<tr>
<td>Size of company</td>
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<td>Reputation of employer</td>
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<td>Management style</td>
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<td>Location</td>
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<td>Other:</td>
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<tr>
<td>Base salary</td>
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<td>Bonus/stock-options etc</td>
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<tr>
<td>Benefits (pensions, insurance, vacation etc)</td>
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<tr>
<td>Perks (car, memberships, cafeteria, etc)</td>
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<td>Travel required</td>
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<tr>
<td>Commuting requirements</td>
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<tr>
<td>Other:</td>
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<td>TOTAL</td>
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</table>

What’s Your Salary Range?

START

Market Rate Salary Range

Begin by determining the market salary range for the position you are negotiating.

- Review salary data in the MIT Graduating Student Survey
- Review the Bureau of Labor Statistics Pay Data Range for your field/industry/location
  https://www.bls.gov/bls/blswage.htm
- Review salary comparison websites such as www.glassdoor.com, www.payscale.com, and www.salary.com

Use this data to determine your market range:

Low (10%) $ ________________________  High (90%) $ ________________________

NEXT

Personal Salary Range

Determine your personal salary range based on your own financial needs. It can be helpful to prepare a budget to understand what your monthly expenses might be. (Remember to consider things like housing, utilities, food, transportation and parking, health, entertainment, family or pet expenses, student loans, etc.)

Minimum salary to meet your budget needs $ 
Ideal salary to meet your desired lifestyle $ 

Use this data to determine your personal range:

Low $ _____________________________  High $ _____________________________

PREPARE

Before you negotiate, use the assessments above to fill in these key numbers.

Salary you would like to earn $ 
Salary you need to earn $ 
Salary you would be willing to settle for $ 

When you have an offer, you’re ready to negotiate!
Negotiating a Job Offer

Give Initial Response to Offer

• Respond gratefully even if the offer is below expectations. Ask to have some time to think about it, and agree on a response date.

Research

• Fill out the job evaluation worksheet on the previous page
• Find salary and bonus data for your major and industry; use the Graduating Student Survey at https://gecd.mit.edu/resources/survey-data
• Determine market rate salary range and your personal range (see pg. 69)
• Consider negotiating non-salary items as well (see next page).

Psychological Preparation

• Why do you want to negotiate?
• Do you know what you want to achieve?
• How will you respond to counteroffers?
• What are your alternatives?
• What are you willing to accept?

Develop a Strategy

• Consider all factors, including your own strengths and weaknesses as a candidate.
• How serious are you about this position over another? Do you have other offers with pending deadlines?
• Time your negotiations accordingly; don’t wait until the last minute.

Practice

• Ask a friend or someone at CAPD to represent the employer
• Ask them to negotiate at the extremes of possible employer response so you are ready for both possibilities
• Ask them to behave in an accommodating manner and then in a less congenial manner, so you are fully prepared

Contact the Organization

• Identify who is best to negotiate with—Human Resources? Your interviewer? Call to present your items to be negotiated—be enthusiastic and reassure them of your interest in the position.
• Keep it positive and respectful; negotiating should be a win-win
• If they meet your requests, tell them thank you and as soon as you get the information in writing, you will be ready to accept it

Get Terms in Writing and Decide

• Always make sure you have an offer in writing prior to accepting to confirm all parties are on the same page
• Review your needs and goals to determine if the negotiated offer is the right fit
• Provide your response as soon as possible, especially if you decide to decline the offer

What Can Be Negotiated?

<table>
<thead>
<tr>
<th>Usually Negotiable</th>
<th>Sometimes Negotiable</th>
<th>Usually Non-Negotiable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer Deadline</td>
<td>Telecommuting</td>
<td>Vacation</td>
</tr>
<tr>
<td>Start Date</td>
<td>Position Title</td>
<td>Health Insurance</td>
</tr>
<tr>
<td>Salary</td>
<td>Position Location</td>
<td>Retirement Savings Plan</td>
</tr>
<tr>
<td>Signing Bonus</td>
<td>Performance Review Timing/ Frequency</td>
<td>Non-Disclosure Agreements</td>
</tr>
<tr>
<td>Relocation Expenses</td>
<td>Non-Compete Agreements Timeframe</td>
<td>Other benefits that apply to all employees</td>
</tr>
</tbody>
</table>

How to Decline an Offer

• Always be polite regardless of your response to an offer.
• Start off with a positive statement thanking the organization for their offer.
• Let them know that you will unfortunately have to decline.
• Provide them with an appropriate reason for the decline (you have another offer you are going to pursue, the location, the benefits, etc.).
• Thank them again and wish them well.

Source: GECO 2017 Graduating Student Survey

22% of undergraduates and 30% of master’s students negotiated their salary. The average negotiated increase in bonus was $13,804 for undergraduates and $12,968 for master’s students.

The average negotiated increase in salary of undergraduates was $3,980 and $6,927 for master’s students.

Top 3 most essential factors affecting whether undergrad accepted a job:
• job content
• creative/challenging work
• fit with culture
• 14th on list: Salary
Applying to Graduate School

Research

Talk to your academic advisor and/or a counselor at CAPD about your career goals and preparation for graduate school. Self-reflect about why you want to attend and what you hope to accomplish. Research programs of interest and evaluate the following:

- Curriculum and degree requirements
- Faculty
- Research, teaching, and internship opportunities
- Financial support
- Location and size
- Job opportunities upon graduation (where are the graduates now?)

Prepare

Get experience (see pages 15-16) and do informational interviewing (see pages 18-19) to refine your interests.

- Create your resume; visit CAPD during drop-in hours to have it reviewed
- Ask for Letters of Recommendation as you network and work with professors, professionals, and mentors.
- Prepare for and take the appropriate standardized tests based on your graduate school list of requirements (e.g. GRE, GMAT, LSAT, etc)

Apply

Determine application deadlines and required materials and make a list and timeline. Below are typical requirements but check with each program well ahead of the deadline.

- Application form
- Statement of Purpose and/or Personal Statement
- Letters of recommendation (typically 2-3 depending on program)
- Official transcripts from all higher education institutions attended
- Official score reports from standardized exams
- Interview
- Resume
- Supplemental materials requested
- Application fee

Sample Timeline

<table>
<thead>
<tr>
<th>Page 1</th>
<th>Page 2</th>
<th>Page 3</th>
<th>Page 4</th>
<th>Page 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose a major</td>
<td>Research, teaching, and internship opportunities</td>
<td>Financial support</td>
<td>Location and size</td>
<td>Job opportunities upon graduation</td>
</tr>
<tr>
<td>Data required pre-req courses for the field</td>
<td>Refine background knowledge in the field</td>
<td>Consider departmental norms before applying to programs or special research opportunities</td>
<td></td>
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</tr>
<tr>
<td>Get involved with faculty members as well as professionals outside of academia</td>
<td>Develop professional skills in the field</td>
<td>Ask for letters of recommendation and apply</td>
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</tr>
<tr>
<td>Network with and informally contact professionals in your field</td>
<td>Prepare and take appropriate standardized exam</td>
<td>Work on personal statement</td>
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</tbody>
</table>

Sample timeline reprinted with permission from the University of California, San Diego’s Triton Career Guide.

Statement of Purpose

A Statement of Purpose is typically one of the requirements for graduate school admission. It should reveal your experience, motivation, maturity and readiness to pursue graduate education and should be tailored to each department to which you will submit an application. It is very important to spend the necessary time to make it a compelling document.

Steps to Creating a Strong Statement of Purpose:

1. Research the programs
   a. Make a spreadsheet containing the departments and programs of interest. Read about them online and request more information from them. Enter relevant info into your spreadsheet (e.g. location, areas of research, financial support, faculty of interest, etc).
   b. For areas of research interest, read scientific reviews to get an understanding of the field and its current challenges. Refine your areas of interest based on what you have learned.
   c. Consider where each field might lead you. Is it cutting edge, or an area that has waning interest?

2. Reflect on your experiences and why you are applying
   a. What were the major moments in your life that led to your current research interest(s) and to these departments or programs?
   b. Why did you choose your undergraduate major?
   c. What did you choose your undergraduate research topic(s), field, and/or department?
   d. What are your career goals? What do you hope to accomplish? What drives you? What motivates you?

3. Make an outline
   a. Based on your reflections above, define a central theme for the body of the statement
   b. Organize the outline into sections
   c. Your outline should cover these areas with specific examples where possible:
      i. What aspects of the school/department/program appeals to you?
      ii. What are your research interest(s) and how did you become interested in them?
      iii. What are your experiences that relate to this area (e.g. research experiences, courses, etc.)?
      iv. What are your career goals (e.g. professorship)?
      v. What characteristics of the department or program can help you accomplish your goals?
      vi. What positive aspects do you bring to the department or program?

4. Write a draft of Statement of Purpose
   a. Always use positive language when referring to yourself.
      i. Don’t apologize if your research experiences are not all related. Exploration is expected at the undergraduate level and helps you learn what you want to pursue.
      ii. Write in a confident, but not arrogant manner.
   b. Give detailed examples, but make every word count (be concise).
   c. Use transition words, sentences and paragraphs. Your statement must read smoothly.
   d. Refrain from starting neighboring paragraphs the same way.
   e. Have strong opening and closing paragraphs.
   f. Thank the admissions committee for their time at the end of your Statement of Purpose.

5. Revise and edit
   a. When you are finished with your draft, read it out loud to yourself and make corrections.
   b. Ask friends, colleagues and professors to read your edited draft. Take their comments into consideration, revise and edit your draft.

Faculty Job Search

Timeline

The academic job search generally begins in the fall and continues into late winter or early spring, depending upon the institutions hiring cycle. Below is what you might expect as you pursue roles in academia:

Sep - Nov—Seek advice and support from your advisor and other mentors. Networking is also a great way to find opportunities and meet new people in your field. Research your targeted institutions and the following:

• What role do you want?
• Research (how much)? | Teaching (how much)? | Other roles within the institution?
• What kind of academic institution do you want to work in?
• How big? | Public, private, something else? | Students (what level)?
• Funding? | U.S. or International?

Create your CV, Cover Letter, Research Statement, and Teaching Philosophy. If you are a post-doctoral fellow, see the Assistant Director of Postdoctoral Scholars; if a grad student, visit CAPD and have your documents reviewed by one of our counselors.

Nov - Jan—Prepare for campus visits. Some may begin with a telephone or Skype screening interview. Most academic interviews will include a presentation of your research and a chalk talk. After every interview always follow up with an enthusiastic thank you email to the committee for their time.

Mar - May—This is when most receive offers and some may enter into negotiations, if necessary. Be sure you are being offered the space and resources you need to be successful.

Academic CV—While there is no standard format or style, you should consult with people in your discipline about particularities of Cvs in your field. See page 46 for general CV Guidelines. This handbook has two Cvs (CV1 and CV2) that were used successfully for academic positions. Make sure your research is strongly displayed on pages 1-2 followed by a detailed teaching section.

Publication section in CV—List in reverse chronological order and put your name in bold
• You can use asterisk* on papers for which you made a leading contribution
• You can also create separate categories: "Publications" "Presentations"
• Can group Publications in sections e.g.: “Books” “Refereed Articles” “Abstracts”
• Can list “Works in Press” “Submitted Articles” or “Manuscript in Preparation”

Research Statement—Length can vary, generally 4-7 pages and should include both your current and future research, along with your collaborations. And your future should align with their future. Often they include graphs and/or charts to deliver a visual message and may also include language highlighting your ability to obtain funding.

Teaching Statement—Reflects your philosophy as a teacher, and identifies what undergrad classes you would teach and what graduate courses you might develop; usually one page.

Cover Letter—One page introduction that highlights your abilities to successfully work in their environment (see several MIT Cover Letters in this handbook).

Documents

CURRENT RESEARCH
Active Control of Rotorcraft Vibration

I am currently working with Boeing Helicopters to develop advanced control techniques for control of rotorcraft vibration, so that the vibration typically experienced by helicopters can be significantly reduced. My advisor Prof. Steven Hall and his former doctoral students developed the X-frame actuator for those purposes, and I am working on the design and implementation of the advanced Higher Harmonic Control (HHC) algorithms using the X-frame actuator for an MD-900 helicopter. The advanced HHC includes an intelligent anti-windup scheme, which shows better performance than traditional discrete HHC. The intelligent anti-windup algorithm ensures that the output signals from each controller do not saturate, so that multiple HHC systems can be implemented without causing any difficulties. The active rotor system with the advanced HHC algorithms will be flight-tested in 2003.

Active Control of Noise Radiated from Underwater Vehicles

I have worked with Northrop Grumman Corp. and Materials Systems Inc. to develop new technology for the reduction of radiated noise from vibrating structures using smart structures technologies. This project has been funded by the Office of Naval Research, with an objective of developing “smart” underwater vehicle systems so that the enemy cannot detect attack in advance. My responsibility in this project is to develop the control architecture and methodology to reduce the radiated noise from vibrating structures. In order to accomplish this, I have designed two different controller architectures. The first one is the assembly of local controllers, which are implemented for each sensor/actuator pair to reduce its vibration level. The second one is a global controller, which makes the structure a weak radiator by coordinating the action of local controllers. In order to implement the global controller successfully, I have developed a new wavenumber domain sensing method and applied it to the feedback controller design for active structural acoustic control. The approach is to minimize the total acoustic power radiated from vibrating structures in the wavenumber domain. The new sensing method greatly simplifies the design of IMMO LQG controllers for active structural acoustic control by reducing the effort to model the acoustic radiation from the structure and allowing the systematic development of state-space models for radiating wavenumber components. Further, I have extended the concept to general complex structures, so that it can be applied for reducing radiated noise from any vibrating structures. The new sensing method is numerically validated on a thick-walled cylindrical shell with 55 piezoelectric panels mounted.

FUTURE RESEARCH GOALS
My future research goal is to develop “intelligent structural systems”, from the micro-scales (MEMS) to macro-scales (aerospace systems and underwater vehicles), which will contain array of sensor/actuator pairs and embedded devices for controls and decision-making algorithms. Those systems should be able to coordinate large numbers of devices and adapt themselves to uncertain environmental changes in an intelligent manner. For this research goal, I will focus on the following three research areas. First, I will carry out research on structure/ fluid control interaction phenomena for complex systems. The phenomena will be critical design issues in those complex structural systems, both in micro- and macro-scales, so the fundamental understanding of the phenomena is very important to successful implementation of the structural/acoustic control algorithms. Second, I will extend my specialization in smart structures technologies to the development of advanced sensors and actuators for intelligent structural systems. Since the systems will contain arrays of embedded devices, such as micro-sensors and actuators, the development of novel sensors and actuators that can be coordinated and integrated within the systems will be critical in future areas of research. Finally, I will continue my research on advanced control and decision-making algorithms for noise and vibration reduction of complex structural systems. Some of the important requirements of the algorithms include: (1) the ability to handle many sensors and actuators in an efficient manner, (2) robustness to modeling error and uncertain environmental changes, (3) the ability to modify their functions adaptively even in the unexpected change in the plant or environment, and (4) the ability to detect the failure in the plant and maintain the performance by reconfiguring the algorithm architecture. As mentioned earlier, I have developed the novel wavenumber domain feedback controller design method for active structural acoustic control of complex structural systems, which satisfies the first and second requirements. I will continue my research to improve the performance of the method, and therefore to develop “intelligent control design methodology” for complex structural systems, so that those four requirements given above will be successfully satisfied.

Sample Statement of Research Interests

Academic Pathways
My teaching goal is for each and every student to leave my classroom with a solid understanding of engineering concepts and a sound background to analyze engineering systems. I strongly believe that a thorough understanding of undergraduate/graduate courses is most fundamental to young engineers for their future research. My responsibility as instructor would be to help students acquire a solid foundation in the subject matter, and to encourage them to build confidence in their knowledge of the course material, so that they can apply what they learned in my classroom to engineering problems with confidence. I have a very strong undergraduate and graduate education in mechanics, dynamics and controls. Also, I have extensive research experience in structural dynamics, acoustics, and controls, which would allow me to teach students fundamental concepts of engineering systems thoroughly. My primary interests in undergraduate/graduate level teaching lie in the following areas:

**UNDERGRADUATE LEVEL**
- **Mechanical Vibration** — This course would involve basic introduction to mechanical vibration, including free and forced vibration of single- and multi-degree of freedom systems, fundamentals of frequency and modal analysis, and approximate solution techniques.
- **Engineering Mathematics** — This course would be an undergraduate-level introduction to engineering mathematics, including linear algebra, differential equations, complex analysis, and Laplace and Fourier transforms.
- **Feedback Control of Dynamic Systems** — This course would involve introduction to design of feedback control systems, focusing on properties and advantages of feedback systems, time-domain and frequency-domain performance measures, stability and degree of stability, root locus method, Nyquist criterion, and frequency-domain design.

**GRADUATE LEVEL**
- **Advanced Structural Dynamics and Acoustics** — This course would first review single and multiple-degree-of-freedom vibration problems, using matrix formulation and normal mode superposition methods. Then, the course would present various topics in structural dynamics and acoustics, including time and frequency domain solution, random vibration, vibration and noise measurement and analysis techniques, wave motions in structures, structure/fluid interaction problems, and acoustic radiation.
- **Control of Structures** — This course would present fundamental control-structural dynamic interaction from a unified viewpoint, applicable to active control of flexible structures, and active structural acoustic control of structural systems.
- **Multivariable Feedback Control Systems** — This course would be an introduction to the state-space approach to control system analysis and control synthesis, focusing on design of “robust” controllers for mechanical systems, including optimal control methods and the Kalman filter.
- **Continuous and Discrete Time Signal Processing** — This course would provide a theoretical foundation of signal processing techniques necessary for mechanical engineers. This course would focus on the analysis and processing of experimental data, and real-time experimental control methods, including Laplace and Fourier transforms, spectral analysis, filter design, system identification.

These present general topics and I would be happy to teach more specific courses according to the needs of the students and the department.
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My passion is using data to solve complex, real-world problems. I have had the amazing opportunity to study machine learning, data mining, and advanced statistical theory for my MS in Data Science. Equipped with essential technical skills and extensive hands-on experience, I look forward to harnessing the power of data science to help shape the world around us for the better.

**EDUCATION**

| Columbia University in the City of New York |
| Master of Science in Data Science | 2020 |
| Algorithms for Data Science |
| Probability & Statistical Inference |
| Machine Learning for Data Science |
| Exploratory Data Analysis & Visualization |
| Massachusetts Institute of Technology (MIT) |
| Bachelor of Science | 2019 |

**EXPERIENCE**

Data Science Capstone Project
A semester-length data science project sponsored by a faculty member or Data Science Institute industry affiliate that synthesizes the statistical, computational, engineering challenges & social issues involved in solving complex real-world problems.

**SKILLS**

**COMPUTER SCIENCE**
Python, Java, R, C++

**QUANTITATIVE SKILLS**
Linear Algebra, Calculus

**LEADERSHIP**
Columbia Data Science Society

**HOBBIES**
Networking in New York City, Friends, Music, Meetups, Hackathons

**REFERENCES**
Available upon request at datascience@columbia.edu

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