

# WRITING AN EFFECTIVE RESUME

A resume is a brief summary of your education, work experience, and activities.

You may need to write a resume for a career fair, or to submit as part of an application for an internship, job, graduate school or scholarship.

Your resume should focus on those aspects of your background which are most relevant to your current career objective. It should be easy to read, concise, and accurate. You can save details and specifics for an interview.

This packet accompanies our Resume Writing Workshop and includes information on the following topics:

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# RESUME WRITING RESOURCES

The Co-op Office offers Resume Writing Workshops that teach you how to write a resume or improve the one you already have for your engineering internship or job search. The office also has a number of books on resume writing available for your use, including several geared specifically for engineers. Stop by the Co-op Office to check out these useful resources and to sign up for a workshop. Workshop schedules and signup are also available on our web site at <http://ter.ps/engrworkshop>.

Considering non-engineering opportunities? The University Career Center (3100 Hornbake Library) also sponsors Resume Writing Workshops on a regular basis. See workshop schedules on the Career Center's web page, [www.careers.umd.edu](http://www.careers.umd.edu) or call the University Career Center at (301) 314-7225 to find out when the next one will be held.

## GENERAL RESUME GUIDELINES

### ***Place relevant information toward the top of your resume.***

Sections most relevant to your objective should be at the beginning of your resume. Within sections, place the information in descending order starting with the most recent experiences listed first.

### ***Emphasize your strengths.***

Don't worry if you have limited relevant experience. That's why you're seeking a co-op or internship! But try to show employers what transferable skills you bring. What makes you hard-working, energetic, and enthusiastic?

### ***Be consistent.***

Make sure you use bullets, bolding, underlining, or italics in a uniform style. Use an easily read font such as Times New Roman or Arial (10, 11 or 12 point). Try to keep your top and bottom margins even.

### ***Don't use full sentences.***

Write in phrases starting with a capital letter. Do not use first person pronouns: I, mine, my, me, etc. Write out names of organizations, associations or classes instead of using acronyms like UMCP or ENES100.

### ***Use "action" verbs to describe your accomplishments.***

Focus on examples that demonstrate your strengths instead of taking up space listing duties or responsibilities. See the "Action Word List" and "Turning Responsibilities into Accomplishments" in this handout for ideas.

### ***Keep it short and avoid the fancy resume paper.***

Unless you have significant engineering experience, your resume should be on one page. Recruiters prefer resumes to be on regular instead of bond paper to avoid paper jams in copy machines.

# POSSIBLE SECTIONS FOR YOUR RESUME

Use sections in your resume to draw the reader's attention to the most relevant information. Here are sections you might consider including on a resume for private industry positions.

## CONTACT INFORMATION

Include your legal name, mailing address, phone number with area codes, and an email address. It is crucial that this information is accurate and up to date at all times! Do not make it difficult for an employer to reach you; the job might be filled in just a few days. You may also include your personalized [LinkedIn](#) URL here. If you are a U.S. Citizen, you can also mention that in this section.

## OBJECTIVE

Most college resumes do not need an objective statement. However, if you are going to use one, be specific. For example:

### **OBJECTIVE**

To obtain a summer internship in material science engineering with a focus on biomaterials or nanomaterials.

Remember to incorporate the industry and preferred type of work you would like to do. All of the subsequent information on your resume should relate to and support your objective as closely as possible. You may also include an objective statement if your interest in the position to which you are applying is not obvious from your past experience.

## EDUCATION

Include your degree (B.S., M.S., M.Eng), major and expected graduation date (including your co-op semesters), name of university and location (city & state). For example:

### **EDUCATION**

**B.S., Aerospace Engineering**

University of Maryland

GPA: 3.15

Expected May 2015 (with co-op)

College Park, MD

The EDUCATION section may also include:

- Other colleges you have attended (but generally omit high school)
- Overall GPA: most employers tell us they want to see this
- Study abroad (institution name and location, dates, relevant course highlights)
- Honors/Awards and course highlights (see below)
- Indication that you're responsible for financing a certain percentage of your college expenses

## HONORS AND AWARDS

This can be a standalone section, or a subheading under EDUCATION. List merit scholarships, academic awards, and honors, along with dates received.

## COURSE HIGHLIGHTS

It is more effective to describe projects and accomplishments rather than just to list classes. In a list, include only upper level or elective courses that are relevant to the work you would like to do. Use descriptive titles, not course numbers.

## SKILLS

List your knowledge of computer languages, computer software, operating systems, etc., here. Also, if you have drafting or lab skills, are fluent or proficient in foreign languages, or if you have any other work-related skills that may increase your chances of being selected, list them here. If you have ever obtained a security clearance for a previous job, or if you have a specialized certification, include that as well.

## EXPERIENCE

This section may include paid jobs, internships, engineering class projects, and significant volunteer jobs. List in reverse chronological order, with your most recent experiences first. Include the job title, employer, city, state, dates employed, and a succinct description of your accomplishments.

Use **action words** in your description. Avoid the phrases *Responsible for* and *Duties included*. Be **specific** about your accomplishments in terms of dollars, percentages, dates, etc. Think about the skills you acquired in the position. Consider how your work impacted the department or organization. Mention promotions.

To ensure that the most relevant experience appears near the top of your resume, consider separating your experience section under specific headings, such as TECHNICAL EXPERIENCE, LEADERSHIP EXPERIENCE, RESEARCH EXPERIENCE, OTHER EXPERIENCE, etc.

## ACTIVITIES

Most recruiters say that they seek well-rounded individuals to work in their organizations, so consider highlighting your extra-curricular activities. You can include involvement in

- professional societies
- student organizations, including fraternities, sororities, etc.
- community organizations

If you held a position with responsibility, be sure to include details such as number of hours invested, projects completed, and any skills you may have developed. Your resume will be greatly enhanced by showing active involvement in extra-curricular activities, so if you are not yet active in these, get involved now.

When deciding what to include, do keep in mind the picture you wish to paint for potential employers. Be sure that the activities you include on your resume highlight your transferable skills and interests that are relevant to the position without setting you up for potential discrimination in the hiring process.

## RESUME DOS AND DON'TS

**DO** feel free to create section titles that work for you and your experiences (i.e. Engineering Experience for engineering projects or Additional Experience for unrelated engineering jobs).

**DO** use section titles in a way that allows you to put the most relevant experiences near the top, while still following reverse-chronological order within each section.

**DO** have a separate sheet for references instead of putting them on your resume. See the guidelines at the end of this packet.

**DO NOT** list social security number (except on some federal resumes), marital status, height, weight, or anything else that has no relevance to your qualifications.

**DO NOT** include a photo with your resume.

# TURNING RESPONSIBILITIES INTO ACCOMPLISHMENTS

When giving details on your work, project, leadership or research experience, be sure that your words have the most impact they can. Don't copy and paste the job description that states what you were supposed to do; instead, think about what you actually did or contributed, what tools you used, etc.

For example, how can improve this example?

*ABC Engineering Company*

**Intern**

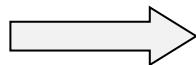
Columbia, MD  
February-May 2014

- Applied knowledge of embedded systems
- Responsible for writing a report

Ask yourself the following questions to give depth to the experience on your resume.

QUESTION	SAMPLE ACCOMPLISHMENT
<b>Who?</b>	Who did the work – one individual, two people, or a team?
<b>What?</b>	What was the subject matter?
<b>Why?</b>	What was the purpose of your work?
<b>How?</b>	How did you do this work? What engineering tools or skills did you apply?
<b>When?</b>	Did you have to work within a certain timeframe?
<b>How much?</b>	Can you quantify your work?
<b>What happened?</b>	What happened to your work after you completed it?
<b>Big picture?</b>	Did your work have an overall impact on the organization?

RESPONSIBILITIES



ACCOMPLISHMENTS

By asking yourself the questions on the previous page, you can expand your descriptions and turn your responsibilities into accomplishment statements.

### EXAMPLE 1

Before	<b>XYZ Company</b> , Germantown, MD Student Researcher	June-July 2004
After	<b>XYZ Company</b> , Germantown, MD Student Researcher	June-July 2004

**Before:** **XYZ Company**, Germantown, MD  
Student Researcher

- Duties included research, report-writing and presentations.

**After:** **XYZ Company**, Germantown, MD  
Student Researcher

- Researched latest developments in embedded systems using technical journals, the Internet, and interviews with engineers.
- Independently wrote a 20-page report on embedded systems to update senior engineers on latest developments in the field.
- Conducted one-hour oral presentation of findings for senior engineers and managers.
- Report persuaded management to begin using new technology which increased efficiency 15% during the first 6 months of its implementation.

### EXAMPLE 2

Before	<b>Home Depot</b> , College Park, MD Department Representative	June 2003 - present
After	<b>Home Depot</b> , College Park, MD Department Representative	June 2003 - present

**Before:** **Home Depot**, College Park, MD  
Department Representative

- Responsible for helping customers, stocking shelves, and ordering materials.

**After:** **Home Depot**, College Park, MD  
Department Representative

- Provided customer assistance and professional advice on home improvement projects.
- Received increased responsibilities including managing multiple departments, training new employees, and preparing inventory orders.
- Participated in extensive training in areas of customer service and management.
- Collaborated with management staff to help make decisions about store policy and staff hiring.

## ACTION WORD LIST FOR ACCOMPLISHMENTS

<b><u>SUPERVISE</u></b>	<b><u>CHANGE</u></b>	<b><u>RESEARCH/TECHNICAL</u></b>	<b><u>COMMUNICATE</u></b>	<b><u>OFFICE ACTIVITIES</u></b>
Administered	Adapted	Analyzed	Advertised	Billed
Controlled	Adjusted	Assembled	Broadcasted	Budgeted
Coordinated	Applied	Assessed	Consulted	Completed
Delegated	Cut	Built	Contracted	Distributed
Demonstrated	Eliminated	Calculated	Explained	Documented
Directed	Implemented	Catalogued	Expressed	Filed
Governed	Improved	Charted	Informed	Kept
Guided	Increased	Collected	Interacted with	Handled
Headed	Innovated	Compared	Interpreted	Illustrated
Led	Installed	Compiled	Interviewed	Obtained
Managed	Introduced	Computed	Instructed	Operated
Monitored	Modified	Constructed	Lectured	Packed
Orchestrated	Proposed	Defined	Marketed	Processed
Oversaw	Reconfigured	Diagnosed	Met with	Produced
Presided	Reconciled	Edited	Negotiated	Purchased
Programmed	Reduced	Engaged	Publicized	Ran
Scheduled	Remodeled	Estimated	Published	Received
	Reorganized	Evaluated	Presented	Saved
<b><u>ASSIST</u></b>	Repaired	Examined	Referred	Sold
Accompanied	Restored	Extrapolated	Related	Shipped
Collaborated with	Revamped	Forecasted	Taught	Typed
Dealt with	Revised	Gathered	Trained	
Guided	Stimulated	Identified	Transmitted	
Helped	Transformed	Implemented		<b><u>CREATE</u></b>
Notified		Indexed		Arranged
Performed		Inspected		Composed
Served	Advised	Investigated		Conceived
Supported	Convinced	Isolated		Conceptualized
	Counseled	Maintained		Designed
<b><u>DECISION</u></b>	Dispatched	Measured		Developed
Activated	Educated	Observed		Devised
Approved	Encouraged	Organized		Drafted
Chose	Guided	Perceived		Established
Decided	Indoctrinated	Pinpointed		Fabricated
Determined	Innovated	Planned		Formulated
Enlisted	Motivated	Prepared		Founded
Hired	Negotiated	Projected		Generated
Ordered	Orchestrated	Recorded		Implemented
Recruited	Persuaded	Researched		Initiated
Resolved	Promoted	Reviewed		Invented
Selected	Recommended	Screened		Launched
Specified	Referred	Solved		Made
	Stimulated	Surveyed		Opened
<b><u>SHOW</u></b>	Suggested	Synthesized		Originated
Conducted	Supported	Tested		Produced
Demonstrated		Traced		Set up
Exhibited		Updated		Structured
Illustrated				Wrote
Performed				
Proved				
Represented				

# SAMPLE RESUMES

## Amaya A. Freshman

### EDUCATION

University of Maryland, College Park, MD  
B.S., Mechanical Engineering

387 Turtle Avenue, College Park, MD 20742  
[student@terpmail.umd.edu](mailto:student@terpmail.umd.edu) • (410) 123 - 4567

GPA 3.0  
Expected May 2018

FLEXUS: Women in Engineering Living and Learning Community Expected Citation May 2016

### RELEVANT PROJECTS

Autonomous Hovercraft Project, Structures Subteam Leader September 2014 – December 2014  
University of Maryland, College Park, MD

- Collaborated with a group of 10 students to design, build, and test an autonomous hovercraft on a budget of \$350 and a deadline of 3 months
- Led the structure sub team to build the structure and shell of the hovercraft
- Individually created a full technical drawing of hovercraft and its components on Pro/Engineer
- Prepared and presented a 25 page final design report

Project Lead the Way (PLTW) September 2012 – May 2014

Severna Park High School, Severna Park, MD

PLTW provides rigorous and innovative engineering education curriculum for school systems. PLTW alumni study engineering and technology at five to ten times the average rate of all students.

Light Sensor Marble Sorter Project, Team Leader

- Led a team of 3 students to design and construct a marble sorting device with Lego design parts
- Designed a computer program to enable the machine to run and sort marbles
- Machine successfully sorted 30 marbles of 4 different colors into different areas according to color

Puzzle Cube Project, CAD Subteam Leader

- Designed and constructed a wooden puzzle cube made up of 8 pieces
- Used hand drawn technical drawings and CAD programs to design and plan puzzle before construction
- Puzzle was given a "challenging" level of difficulty and was not able to be solved in less than 6 minutes

### ACTIVITIES

Terrapin Theatre Troupe, Member September 2014 – Present

- Sing and dance in a theatre troupe on campus that puts on two shows per semester

The UMD Treblemakers, Member September 2014 – Present

- Sing in an all-female a cappella group on campus

National Honor Society, Treasurer September 2013 – May 2014

- Organized fundraisers and maintained funds for the organization
- Managed the volunteers and food preparation of the concession stand at the Navy Football Stadium

### SKILLS

Pro/Engineer Software, MATLAB, Microsoft Word, Excel, PowerPoint

**Please Note:** Examples in this handout are not shown actual size. The content, font size and margins of sample resumes have been edited from the original documents.

# PATRICK FRESHMAN

1234 Campus Drive, Davidsonville, MD 21031,

(410) 410-4104, [umdterps@gmail.com](mailto:umdterps@gmail.com)

[www.linkedin.com/in/pfreshman](http://www.linkedin.com/in/pfreshman)

<b>OBJECTIVE</b>	To obtain an internship in Material Science Engineering with a focus in nanomaterials.	
<b>EDUCATION</b>	<b>University of Maryland</b> BS, Materials Science and Engineering GPA: 4.0	College Park, MD Expected May 2018
<b>HONORS</b>	University of Maryland Honors Program Department of Materials Science Scholarship MD State Scholarship for Academic Excellence	Sept. 2014–May 2018 Sept. 2014–May 2015 Sept. 2014
<b>TECHNICAL EXPERIENCE</b>	<b>Engineering Design Project</b> Hovercraft Sub-Group Leader <ul style="list-style-type: none"><li>• Managed a team of 3 students, working within project guidelines and timeframe to design, build, and test an autonomous hovercraft</li><li>• Calculated thrust requirements of design and chose proper propulsion device</li><li>• Determined power requirements of design, chose proper battery and constructed circuitry for autonomous programmable hovercraft</li><li>• Wrote and presented a 25 page design report, including Pro-Engineer design drawings</li><li>• Successfully navigated the course and received an A on the project</li></ul>	College Park, MD Sept. 2014–Dec. 2014
<b>AFFILIATIONS</b>	<b>National Society of Collegiate Scholars</b> <b>The Minerals, Metals, and Materials Society</b>	Sept. 2014–Present Sept. 2014–Present
<b>SKILLS</b>	<b>Applications:</b> Pro-Engineer (Basic Proficiency), MatLab (Exposure) Microsoft Word, Excel, Powerpoint (Proficient) <b>Languages:</b> Spanish (Conversant)	
<b>WORK EXPERIENCE</b>	<b>Lighthouse Pools Management, Inc.</b> Pool Operator Lifeguard <ul style="list-style-type: none"><li>• Promoted health and safety of pool patrons through enforcement of rules and maintenance of pool chemistry within the guidelines set by the county</li><li>• Mediated disputes arising between workers, delegated assignments to other lifeguards and created weekly work schedule</li></ul>	Hyattsville, MD June–Aug. 2013–2014 June–Aug. 2011–2014
<b>ACTIVITIES</b>	<b>University of Maryland Repertoire Orchestra</b> Practice and perform classical and modern music playing the String Bass	Sept. 2014–Present

# KEITH FRATERNITY

2893 Terrapin Drive, Springfield, IL 21209 • (555) 555-5555 • student@umd.edu

## EDUCATION

**University of Maryland: A. James Clark School of Engineering** College Park, MD  
B.S. Electrical Engineering Expected May 2015  
• 3.5 GPA  
• Dean's List and Academic Honors, 6 semesters.

## **Gemstone Program**

- Aug. 2011 - Present  
• Research the effects of various internal and external factors on English skills of bilingual students.

## WORK EXPERIENCE

**ITT- Advanced Engineering and Sciences** Bowie, MD  
*Technical Intern level 4* June – Aug. 2013  
• Served as algorithm team member for the Spectrum Management Transition Initiative (SMTI).  
• Completed the traceability of the engineering analysis for the SMTI project.  
• Aided the head engineer of the algorithm team on the creation of technical engineering specifications.

**Whiting-Turner** Towson, MD  
*Construction Management Intern* June - Aug. 2012  
• Collaborated with the firm in the bid process for two multi-million dollar projects.  
• Aided the closing process for the renovation of the Fallon Federal Building in Baltimore, MD.

**Software Unlimited, Inc.** Baltimore, MD  
*Technician* June - Aug. 2011  
• Trained to install Medical Mastermind, a powerful medical-practice management product.  
• Updated medical software to the latest version of Medical Mastermind at over three hundred doctor offices.

## LEADERSHIP EXPERIENCE

**Alpha Sigma Phi, Fraternity** College Park, MD  
*Vice President* Sept. 2012 - May 2013  
• Managed dozens of committees, officers, and chairs; headed executive meetings.  
**Philanthropy Chair** Sept. 2012 - May 2013  
• Established a community basketball tournament, which raised over \$4000 for the Livestrong Foundation.

**Ralph F. Burns Leadership Institute** Wernersville, PA  
*Participant* Jan. 2012  
• Improved communication skills through programs that involve team-building exercises and debates in order to produce leaders in the fraternity and the community.

## SKILLS

**Proficient In:** MATLAB, AutoCAD 2008, Microstation, Pro-Engineer, Robotics Lab, Microsoft Office  
**Exposure To:** HTML and Java

# BEKELE D. PROJECTS

umdstudent@gmail.com • (301) 555-5555  
4555 Bonnie Branch Road, Ellicott City, MD 21043

## PROFILE

Entry-level engineer focusing on satellite design and control, aerospace structures, thermal system design, or launch vehicle development

## EDUCATION

**University of Maryland, A. James Clark School of Engineering** College Park, MD  
B.S., Aerospace Engineering GPA: 3.8 Expected May 2015

## ENGINEERING PROJECTS

**Supersonic Wedge Model, Special Topics in Wind Tunnel Testing** College Park, MD  
*Solo Research and Design* September 2014–present

- Researched, designed, and tested a wedge model for use in a Mach 2.2 wind tunnel.
- Analyzed shockwave patterns produced using a color schlieron system.

**Satellite Trajectory Analysis, Space Navigation and Guidance** College Park, MD  
*Project Team Member* September 2013–December 2013

- Used telescope observations to plot the trajectory of several satellites.
- Executed coordinate transformations using MATLAB algorithms to determine trajectories.

**Burkina Faso Water Project, Engineers Without Borders** College Park, MD  
*Team Member* August 2012–May 2013

- Collaborated with a group of students and professional engineers to design a viable water extraction system for a village in Burkina Faso.
- Aided in the design of the water storage tank and water distribution system.

**Bridge Design Team, Statics** College Park, MD  
*Project Team Co-Leader* January 2012–May 2012

- Helped lead a team of 8 students to design, fabricate, and test a functional prototype of a wooden bridge designed to optimize the strength-to-weight ratio on a 3 week deadline.
- Placed 2<sup>nd</sup> for the best strength-to-weight ratio and received an A on the project.

## COMPUTER SKILLS

**Engineering Applications:** AutoCAD, Pro Engineer, Inventor, EES, MATLAB, COMSOL, SolidWorks, 5 years of CAD drafting experience on multiple CAD programs

**FEA experience**

**Languages:** C++, MATLAB

**Applications:** Microsoft Office, Web Browsers, Adobe Photoshop, Adobe Dreamweaver

**Platforms:** Windows 98/2000/XP/Vista/7

## AFFILIATIONS

American Institute of Aeronautics and Astronautics 2010-2013

# Emily K. Quest

1234 Turtles Road, Newark, NJ 07101 - 862.222.5555 - umdstudent@umd.edu

## OBJECTIVE

To obtain a summer internship utilizing the engineering skills learned in the fire protection program and business skills learned in the QUEST program.

## EDUCATION

**University of Maryland** College Park, MD  
B.S. Fire Protection Engineering (GPA: 3.63) Expected May 2016

**Quality Enhancement Systems and Teams (QUEST)** Expected May 2016  
Interdisciplinary quality management program that focuses on customer value management, process and product design, problem solving, project management, customer satisfaction, and teamwork.

- Worked on a team of 6 students with Unilever in order to establish a Foreign Material Reduction Plan, utilizing several Six Sigma and Lean strategies

## EXPERIENCE

**Naval Research Laboratory** Washington, DC  
Intern, Combustion Dynamics Section May 2014 - August 2014

- Conducted research on high-expansion foam as a fire suppressant using a modified, closed cup burner apparatus.
- Determined minimum expansion ratio necessary for flame extinction at specific fuel flow rates and oxygen concentrations.
- Calibrated equipment, and revised and created protocol documentation for lab equipment use.
- Observed and analyzed data from full-scale, low-expansion foam pool fire experiments.

**Lego Robotics Camp** College Park, MD  
Intern June 2013 - August 2013

- Instructed students on LEGO Mindstorm software and hardware, as part of the Center for Minorities in Science and Engineering's curriculum in engineering fundamentals for middle school students.

**Digital Management, Inc.** Bethesda, MD  
Intern January 2012

- Researched complex U.S. Government IT Services market, and presented a thorough analysis of competition to the company's senior board.

## HONORS AND AWARDS

Banneker Key Scholar Full, four-year scholarship to the University of Maryland

University of Maryland Honors Program

Salamander Membership Honorary Fire Protection Engineering Society, initiated April 2009

## ACTIVITIES

Society of Fire Protection Engineers August 2013 - Present  
University of Maryland Jewish Muslim Alliance August 2012 - Present  
Mighty Sound of Maryland Marching Band, Pep Band August 2012 - Present

## COMPUTER SKILLS

Moderate Experience in Adobe Photoshop, InDesign; Basic Proficiency in LabView; Proficient in Microsoft Office (Word, Excel, Powerpoint, Publisher)

## Liliana A. Intern

terpstudent@terpmail.umd.edu, (301) 111-1234

School Address: 6223 La Plata Hall, College Park, MD 20742

Permanent Address: 65444 Brookline Way, Centerville, NJ 01208

Seeking mechanical engineering internship with a focus on flight and space exploration

### EDUCATION

#### University of Maryland

B.S., Mechanical Engineering

GPA: 3.76 – University Honors Program

College Park, MD

Anticipated May 2015

### HONORS

Mechanical Engineering Honor Society, Pi Tau Sigma

Jan. 2013 – May 2013

Barbara J. Dieter Scholarship, A. James Clark School of Engineering

Sept. 2011 – present

### TECHNICAL EXPERIENCE

#### Johns Hopkins University Applied Physics Laboratory

Laurel, MD

Intern: Sentiment Extraction – Milton S. Eisenhower Research Center

Jan, June 2013 – Aug. 2013

- Researched field of natural language processing (NLP)
- Parsed sentences using Stanford typed dependency (SD) representation to extract textual relations
- Developed feature set from tagged sentiment words for input into conditional random field (CRF) model

#### University of Maryland

College Park, MD

Hovercraft Sub-group Leader – Engineering Design

Sept. 2011 – Dec. 2011

- Calculated pressure requirements of design and subsequently chose proper levitation device
- Successfully collaborated with teammembers to prepare and present a formal preliminary and final design report of completed hovercraft model using Pro/Engineer, Microsoft Excel, and PowerPoint

### LEADERSHIP EXPERIENCE

#### University of Maryland

College Park, MD

Peer Assistant – Engineering Co-op & Career Services Office

Jan. 2013 – present

- Critique and provide advice for undergraduate engineering student resumes and other job search documents
- Conduct presentations as part of student how-to workshops explaining online, job-search database

#### Society of Women Engineers Annual Conference

Long Beach, CA

Presenter – Region E Joint Collegiate and Professional Meeting

Oct. 2012

- Demonstrated new and more efficient blog format created after being elected to position of Regional Collegiate Communications Editor (RCCE)

### ACTIVITIES

- American Society of Mechanical Engineers: Student Member

Sept. 2012 – present

- University of Maryland Terp Runners Club

Sept. 2011 – present

### COMPUTER SKILLS

Applications: Pro/Engineer (*basic proficiency*), MATLAB, Microsoft Office, Access, Excel

# Jane Summary

123 Terrapin Terrace, College Park, MD 20742  
301.555.5000 • student@umd.edu

## ENTRY-LEVEL CIVIL ENGINEER

Civil Engineer with a Bachelor's Degree (BSCE) and computer-aided drafting (CAD) and design training. Demonstrated track record in project management, and engineering design with the ability to manage people and resources to produce quality results on time and within budget constraints. Proven communication skills and a "go-getter" attitude that contributes to individual and team goals.

### KNOWLEDGE, SKILLS, AND TRAINING

- AutoCAD 3D Modeling
- MicroStation
- MATLAB
- ArcGIS
- Structural Analysis
- Engineering Materials
- Geometrics and GIS
- Fluid Mechanics
- Geotechnical Engineering
- Engineering Project Management
- Proficient in Spanish

### EDUCATION

**Bachelor of Science, Civil Engineering,** Expected December 2015  
*University of Maryland*, College Park, MD Major GPA: 3.2, Cumulative GPA: 2.8

**Bachelor of Science, International Business** May 2006  
*University of Maryland*, College Park, MD GPA: 3.8

### EXPERIENCE

**Ecuador Project Leader** June 2013 – Present  
*Engineers without Borders*, Uduzapa, Ecuador

- Coordinated a team of eighteen volunteers to analyze soil data during the four-week construction phase, successfully installing 39 household latrines, significantly improving public health conditions

**Construction Group Member** January – October 2012  
*U.S. Department of Energy 2005 Solar Decathlon*, University of Maryland Team, College Park, MD

- Networked with company representatives at the 2008 International Builder's Show to obtain over \$50,000 in donations of free and reduced-cost building materials.
- Performed friction testing on footings to analyze lateral load capacity; conducted compression testing on sample concrete cylinders to determine breaking strengths.
- Awards: People's Choice Award; 8<sup>th</sup> place in overall competition for 800 square foot solar house.

**Project Team Member, Bridge Anti-Icing Project** August 2011 – December 2011  
*Introduction to Engineering Design*, University of Maryland, College Park, MD

- Designed, built, and tested a functional prototype of an autonomous bridge de-icing system.

**International Sales Representative** August 2006 – November 2010  
*Hilton Worldwide*, New York, NY

- Responded to sales inquiries, initiated new sales, and solicited potential clients.

### MEMBERSHIPS AND ACTIVITIES

**Society of Hispanic Professional Engineers (SHPE)**, Active Member January 2012 – Present  
**American Society of Civil Engineers (ASCE)**, Secretary September 2011 – May 2012

## ANA BIOE-DEVICES

8000 Boteler Lane, College Park, MD 20740 • 123-456-7890 • [sbioe@terpmail.umd.edu](mailto:sbioe@terpmail.umd.edu)

### Objective

Seeking an entry-level design engineer position for biomedical devices

### Education

A. James Clark School of Engineering, University of Maryland

Expected Graduation Date: May 2014

B.S. Bioengineering

GPA: 3.52

- Dean's List: Fall 2011, Spring 2012, Fall 2013
- Courses: Bioinstrumentation, Biomaterials, Biomechanics, Computer-Aided Design, Modeling Physiological Systems

### Skills

CREO Parametric, Pro/Engineer, Solidworks, Autodesk Inventor, NX 8.5 (exposure), MATLAB, C programming (exposure), FEA (CAD exposure), Microsoft Office

### Relevant Experience

Scaled Model of Boeing 747-200B

Jan. 2014

CAD Team Member

College Park, MD

- Modeled a scaled replica of the Air Force One model of the Boeing 747-200B in a team of six engineers.
- Individually drafted the vertical stabilizer and rudder in CREO Parametric 2.0.
- Compiled a 20-page design report with 2D drawings and bill of materials, and a presentation with flight simulation.

Infant Respiratory Monitor

Sept. 2011 – Jan. 2014

Team Leader

College Park, MD

- Led a team of five multidisciplinary undergraduate and graduate students to design and prototype an infant respiratory monitor for neonatal care units in developing nations.
- Independently researched and proposed the pulse oximetry method of blood-oxygen detection.
- Drafted the circuit schematics by utilizing hand-drawings and CAD.
- Conceptualized universal user interface and device's foot strap design.
- Designed and drafted CAD drawing of 3-D printed diode enclosure.
- Composed and presented current results on a poster at Maryland Day 2013.

Model of Magnetic Drug Nanoparticle Therapy in Blood Vessel

Sept. 2013 – Dec. 2013

Group Member

College Park, MD

- Calculated non-dimensionalized model of a magnetic drug nanoparticle in blood for a scaled experimental setup.
- Determined experimental materials by analyzing fluid forces of blood on a particle and blood vessel parameters
- Presented results in a 20-page design report with Force Body Diagrams, and experimental protocol.

A.J. Drexel Plasma Institute

May 2012 – Jan. 2013

Research Assistant

Camden, NJ

- Designed and conducted experiments, with graduate students and independently, utilizing non-thermal and thermal sources of plasma: Floating Electrode Dielectric Barrier Discharge (FE-DBD) and GlidArc Plasmatron.
- Managed bacterial cultures and executed projects modeling applications of FE-DBD plasma in microbiology sterilization for hand sanitization, spore growth inhibition, and infection prevention post optical surgery.
- Presented data and relevant research from scientific journals at weekly meetings for evaluation and critique.

Mechanical Analysis of a Knee

Sept. 2012 – Dec. 2012

Group Member

College Park, MD

- Calculated static and dynamic forces present in the knee before, during, and after kicking a soccer ball.
- Analyzed tendon and muscle data to determine the risk of injury to the ACL, patellar tendon, and quadriceps muscles.
- Individually created Force Body diagrams to demonstrate the direction and magnitude of musculoskeletal forces.

### Activities & Affiliations

Engineering World Health – General Body Secretary, Team Leader

Sept. 2011 – Present

Biomedical Engineers Society

Sept. 2010 – Present

Alumni Cup

Feb. 2014

- Represented the bioengineering department in Rube Goldberg machine competition to insert a CD into a drive.
- Collaborated on design and construction, individually drafted hand-drawings of entire machine, and presented design to panel of judges.

# ANA BIOE-TISSUE

8000 Boteler Lane, College Park, MD 20740 • 123-456-7890 • [sbioe@terpmail.umd.edu](mailto:sbioe@terpmail.umd.edu)

## Objective

Interested in an entry-level research position for tissue engineering.

## Education

**University of Maryland**

B.S. Bioengineering

Dean's List: Fall 2011, Spring 2012, Fall 2013

**Expected Graduation Date: May 2014**

GPA: 3.52

## Course Highlights

Biomaterials, Biosensor Techniques, Modeling Physiological Systems, Tissue Engineering, Technical Writing

## Skills

Bacterial culture, Stem cell culture, Gel Electrophoresis, ELISA, FRET, Western Blotting, MATLAB, Microsoft Office

## Relevant Experience

**Model of Magnetic Drug Nanoparticle Therapy in Blood Vessel**

**Sept. 2013 – Dec. 2013**

*Group Member*

*College Park, MD*

- Calculated a non-dimensionalized model of a magnetic drug nanoparticle in blood for a scaled experimental setup.
- Determined experimental materials by analyzing fluid forces of blood on a particle and blood vessel parameters
- Presented results in a 20-page design report with Force Body Diagrams, and experimental protocol.

**A.J. Drexel Plasma Institute**

**May 2012 – Jan. 2013**

*Research Assistant*

*Camden, NJ*

- Designed and conducted experiments, with graduate students and independently, utilizing non-thermal and thermal sources of plasma: Floating Electrode Dielectric Barrier Discharge (FE-DBD) and GlidArc Plasmatron.
- Managed bacterial cultures and executed projects modeling applications of FE-DBD plasma in microbiology sterilization for hand sanitization, spore growth inhibition, and infection prevention post optical surgery.
- Presented data and relevant research from scientific journals at weekly meetings for evaluation and critique.
- Completed a poster successfully demonstrating that plasma-treated glycol and water mixtures are effective antibacterial agents that was presented at Drexel Research Day in April 2013.

**Mechanical Analysis of a Knee**

**Sept. 2012 – Dec. 2012**

*Group Member*

*College Park, MD*

- Calculated static and dynamic forces present in the knee before, during, and after kicking a soccer ball.
- Analyzed tendon and muscle data to determine the risk of injury to the ACL, patellar tendon, and quadriceps muscles.
- Individually created Force Body diagrams to demonstrate the direction and magnitude of musculoskeletal forces.

**Identification of Apoptosis in Acute Myelocytic Leukemia Cells**

**Jan. 2012 – May 2012**

*Induced by an Unknown Drug*

*College Park, MD*

*Researcher*

- Determined potential of an unknown drug as a cancer treatment by identifying apoptosis in HL60 Leukemia cells.
- Performed Cell Viability dye-Exclusion, Mitochondrial Membrane, Annexin V/Propidium Iodide, and Colorimetric Caspase Activity Assays, as well as Western Blotting to monitor caspase and antibody activity of HL60 cells treated with drug.
- Individually analyzed data using Excel and created graphical interpretations of results for team members.
- Presented a 20-minute presentation of results with suggestions for further testing methods and treatment potential.

**SDS-PAGE Protocol**

**Jan. 2012 – May 2012**

*Team member*

*College Park, MD*

- Designed a protocol for the implementation of SDS-PAGE into an introductory bioengineering lab.
- Reviewed literature in a team of three to determine materials, methods, costs, and predicted results.
- Presented protocol for faculty and peers.

## Memberships & Affiliations

**Engineering World Health – General Body Secretary, Team Leader**

**Sept. 2011 – Present**

**Biomedical Engineers Society**

**Sept. 2010 – Present**

**Alumni Cup**

**Feb. 2014**

- Represented the bioengineering department in Rube Goldberg machine competition to insert a CD into a drive.
- Collaborated on design and construction, individually drafted hand-drawings of entire machine, and presented design to panel of judges.

# Calvin Double Major

[www.linkedin.com/in/cdoublemajor](http://www.linkedin.com/in/cdoublemajor) • cdoublemajor@terpmail.umd.edu

## D.O.D. SECRET CLEARANCE

1234 Testudo Rd, College Park, MD 20740 • (301) 456-7890

### EDUCATION

*B.S. in Aerospace Engineering*

University of Maryland, College Park, MD

*B.S. in Mechanical Engineering*

Expected May 2015

*Minor in International Engineering*

GPA: 3.565

### STUDY ABROAD

*Universidad Carlos III, Madrid, Spain*

March 2013 - July 2013

- Shadowed engineers at Airbus Military's Flight Test Center in Getafe, Spain while studying aerospace engineering courses in English

### SKILLS

Microsoft Office

SolidWorks CAD/FEA

LabVIEW

Catia V5 CAD

Abaqus FEA

MATLAB

Pro/Engineer CAD

ANSYS FEA

C++ Programming

### RELATED EXPERIENCE

**Simulation-Based System Design Laboratory, University of Maryland** College Park, MD

*Undergraduate Research Assistant*

January 2013 – March 2013

- Created detailed 3-D components of virtual reality environments via CAD software programs for a DARPA research project

**Battelle National Biodefense Institute** Frederick, MD

*Engineering Intern*

May 2012 – August 2012

- Edited building drawings, labeled room numbers on exhaust and supply valves, and reviewed AutoCAD drawings and submittals from Kimball Construction for an autoclave move
- Helped orchestrate a preventative maintenance program for the Facility Operations group

**Terps Racing (SAE), University of Maryland** College Park, MD

*Baja SAE Vehicle Build 2011; Project Team Leader*

January 2012 – May 2012

- Modified previous year's Baja car for Birmingham, Alabama water event April 14-17, 2011, converting it into amphibious ATV to traverse a 1-km W-shaped pond and road courses without removing flotation system
- Placed 4<sup>th</sup> out of 49 universities in the main event, a four-hour endurance race

**United States Army Aberdeen Test Center** Aberdeen Proving Ground, MD

*Engineering Technician Intern*

May 2011 – February 2012; August 2012

- Wrote a 50+ page technical and chronological report detailing the range modernization project efforts
- Performed test director tasks on seeded-fault data acquisition road tests of MRAPs, HMMWVs and other military vehicles
- Traveled to Detroit, MI, Yuma, AZ and Churchville, MD to complete testing scenarios

### MEMBERSHIPS AND ACTIVITIES

- American Institute of Aeronautics & Astronautics September 2011 – present
- Black Engineering Society, Events Coordinator September 2010 – present
- UMD Boxing Club September 2010 – Present

# Dana Telecommunications

1234 Testudo Lane, College Park, MD 20740 • (301) 555-5555 • [terpstudent@terpmail.umd.edu](mailto:terpstudent@terpmail.umd.edu)

## EDUCATION

**University of Maryland**  
MS, Telecommunications Engineering

College Park, MD  
Expected May 2016

**BMS College of Engineering, Visvesvaraya Technological University**  
BE, Telecommunication      GPA: 3.75

Bangalore, India  
May 2013

## RELEVANT COURSEWORK

- Networking Protocols
- Cyber Security
- Wireless OFDM Systems
- Wireless LANs
- Advanced Wireless Communications Networks
- Decision Modeling
- AWS/PCS System Implementation
- Organizational Behavior in Telecom Industry

## WORK EXPERIENCE

**McKeldin Library, University of Maryland**  
Office Assistant

College Park, MD  
October 2013 – present

- Worked on a software tool “BSR – Advance” for database maintenance.
- Underwent training to use WEB services for making reports and updating database.
- Applied HTML to create web pages for library Press Releases.

**Mobile Communications Ltd.**  
Engineer

Bangalore, India  
September 2011 – July 2013

- Worked with marketing department to redesign coverage-extension sites to enhance company competitiveness.
- Developed network capacity growth plans and designed 24 new sites to offload capacities from existing sites.
- Led design of 65 coverage-extension sites and optimization of 120 on-air sites.

## PROJECT EXPERIENCE

**WISPY, InSSIDer, WI-FI Scanner**  
Independent Project

College Park, MD  
September 2013

- Inspected WLAN of University of Maryland and personal home access points, as well as the surrounding networks.
- Troubleshoot the access points for higher dBm, playing with frequency spectrum and channels using the tool Channel, RSSI, and “Time Last Seen”.
- Exported Wi-Fi and GPS data to a KML file to view in Google Earth; also compatible with most GPS devices (NMEA).

## TECHNICAL SKILLS

**Programming Skills:** C++, SQL, SQL Server 2008, HTML, XML, JavaScript, MATLAB

**Protocols Knowledge:** TCP-IP, RIPv1, RIPv2, EIGRP, OSPF, BGP

**Computer Skills:** Microsoft Office, Microsoft Windows XP, Microsoft Windows 2000

**Tools:** SPSS Tool, Wireshark, MaxPlan

## ACTIVITIES

**Institute of Electrical and Electronics Engineers**  
Event Organizer/Coordinator

Bangalore, India  
September 2011 – May 2013

- Oversaw the organization of the IEEE tech fest and cultural festival, succeeding at attracting 10% more attendees the first year and 15% more the second year.

1234 Graduate Housing, Apt. 123  
College Park, MD 20740

# ROHIT T. MASTERS

Phone: (123) 456-7890  
E-mail: rtmaster2013@umd.edu

## EDUCATION

UNIVERSITY OF MARYLAND, A. JAMES CLARK SCHOOL OF ENGINEERING M.E. Chemical Engineering	GPA: 3.7	College Park, Maryland Expected May 2015
UNIVERSITY OF VIRGINIA, SCHOOL OF ENGINEERING AND APPLIED SCIENCES B.S. Chemical Engineering, Business Minor	GPA: 3.8	Charlottesville, Virginia May 2010

## RELEVANT EXPERIENCE

ABC DEVELOPMENT Energy Sector Analyst	July 2012-August 2014
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<i>Verification of Enhanced Oil Recovery Audits</i>	Toronto, Canada
<ul style="list-style-type: none"><li>Completed the audit in accordance with ISO 14064 Part 3: Greenhouse Gases: Specification with guidance for the validation and verification of greenhouse gas assertions – facilities generated over \$1.8 million worth of carbon credits.</li><li>Assessed whether the quantity of offsets generated was characterized accurately by evaluating calculation methodologies, re-performing direct and indirect emissions calculations, and analyzing P&amp;IDs of the injection and production facility.</li><li>Identified compressor seals and CO<sub>2</sub> dissolved in stored crude as the missing emission sources that accounted for 22% of the total emissions from the site.</li></ul>	

<i>U.S. Inventory of Greenhouse Gas Emission and Sinks Inventory, Oil and Gas Sector</i>	Washington, DC
<ul style="list-style-type: none"><li>Established the uncertainties associated with each emission source using @RISK, a Monte Carlo simulator capable of performing risk analysis in Excel spreadsheets.</li><li>Improved the U.S. Inventory by researching and quantifying the emissions reductions from technologies and processes reported by Natural Gas STAR Partners to enhance the assumptions and the resulting emissions estimates.</li><li>Calculated emissions from wells with liquid loading problems, flowback during hydraulic fractures, and acid gas removal units.</li><li>Recommended statistical methods to validate the emissions profile of a facility and estimated expected ranges for data elements collected through reporting.</li></ul>	

<i>Measurement Study for Indian Natural Gas Industry</i>	Bhopal, India
<ul style="list-style-type: none"><li>Completed an on-site emissions measurement study of natural gas transmission and natural gas processing plants using instruments including an infrared camera, Hi-Flow Sampler, and calibrated bag.</li><li>Performed seal oil degassing emission measurements from centrifugal compressors using a unique technique to route gas from the vent to a turbine meter as part of the first team to make such measurements in the field.</li><li>Designed Excel-based tools to aggregate emissions data into a comprehensive emissions inventory and perform economic analysis of mitigation options for the major emission sources; analysis revealed savings of \$3.75 million.</li><li>Presented the results of the measurement study and mitigation options to EPA client in a technical presentation.</li></ul>	

<i>Energy Performance Benchmarking and Conservation Potential</i>	Washington, DC
<ul style="list-style-type: none"><li>Established a baseline energy consumption profile for equipment used in transmission processing of oil and gas by researching Title V permits, vendor documents, and by using engineering calculations.</li><li>Developed an estimate of potential energy savings by creating a database of conservation methods and using a proprietary calculation platform.</li></ul>	

*Climate Business Opportunities in the Infrastructure and Natural Resources Industries*

*Washington, DC*

- Identified key investment opportunities to target as climate change and sustainability become increasingly important in developing countries.
- Inventoried and projected the growth of emissions from the oil and gas industry in developing countries based on key market metrics.
- Estimated a reduction potential for emissions by evaluating the implementation of mitigation technologies, including the potential for miniaturized gas-to-liquid technologies.
- Conducted a rigorous search of potential companies within the target regions that met the client's stringent investment criteria.

**ABC ENERGY PARTNERS**

**Project Coordinator**

June 2010 - July 2012

Bethesda, MD

- Delivered technical presentations on emission mitigation technologies and practices and provided logistical support for numerous technology transfer workshops.
- Analyzed data reported through Climate Awareness Reporting Program to identify opportunities to expand the Program and attract new Partners.
- Created a spreadsheet model to analyze the effectiveness of a Joule-Thomson skid used to recover heavier hydrocarbons from vented or flared gas.
- Performed numerous activities in support of measurement studies including the completion of several reports that highlight cost-effective mitigation technologies that offshore and onshore facilities can employ to reduce emissions.
- Established a customer relationship management system and added features to the Program's website resulting in increased engagement with non-active members of the company.
- Devised a bottom-up, plant level, GHG emissions estimate from purchased electricity for the petroleum refining sector.
- Researched and organized data on process units at refineries from the Energy Information Agency.
- Calculated the equivalent distillation capacity of each refinery in the U.S. that took into consideration the complexity of process units at each refinery.

**RESEARCH EXPERIENCE**

**PETROLEUM INSTITUTE**

June – August 2009

Abu Dhabi, UAE

**Research Assistant**

- Established a theoretical formalism linking thermal and visco-elastic properties of crude oil used in reservoir simulations and enhanced oil recovery methods.
- Published results of research:
  - Ayaz, A.; Masters, R.T., Temperature dependent thermodynamic and thermo-elastic properties of crude oil. Journal of Engineering Topics 2010, vol. 5, pp 123-145.
  - Masters, R.T., Perez, P., Visco-elastic and dielectric relaxation studies of crude oil. Petroleum Science and Technology 2011, vol.21, pp 234-344.

**SKILLS AND CERTIFICATIONS**

**Software:** MATLAB, MathCAD, ASPEN, ANSYS, Expert Microsoft Office (Word, Excel, Access, and PowerPoint)

**Laboratory:** Gas Chromatography, organic synthesis & purification, HPLC, atomic absorption

**AFFILIATIONS**

American Institute of Chemical Engineers; Association of Energy Engineers; Tau Beta Pi Honor Society

## DENISE M. BIOTECH-GRAD

19 Some Fake Ct  
Elkridge, MD 21075

[dSmith3@umd.edu](mailto:dSmith3@umd.edu)  
301-555-7890

### OBJECTIVE

To obtain a summer internship position in the biotechnology industry.

### EDUCATION

#### PhD, Bioengineering, Anticipated 2016

University of Maryland, College Park, MD

- Advanced to Candidacy, Nov. 2014
- GPA 4.0/4.0

#### B.S., Chemical Engineering, May 2010

University of Maryland, College Park, MD

- Summa Cum Laude, with Engineering Honors
- GPA 4.0/4.0

### RESEARCH EXPERIENCE

#### Doctoral Dissertation Research

Jun. 2011 - present

University of Maryland, Baltimore, MD

- Investigate poly (amido amine) dendrimers as oral drug carriers of anticancer therapeutics.
- Synthesize surface modified dendrimers and dendrimer drug conjugates and characterize by Nuclear Magnetic Resonance (NMR) and Size Exclusion Chromatography (SEC).
- Assess cytotoxicity, cellular uptake and transepithelial permeability of dendrimers and dendrimer-drug conjugates using an *in vitro* Caco-2 cell model.
- Independently determined impact of PEGylation of dendrimers on dendrimer transport, uptake and interactions with epithelial tight junctions.
- Successfully submitted first author manuscript: **D. Biotech-Grad**, R. Kolhatkar, P. Swaan and H. Ghandehari. "Transepithelial Transport of PEGylated Anionic Poly (amido amine) Dendrimers: Implications for Oral Drug Delivery." *Journal of Controlled Release. In Revision*
- Presented research poster at conference: **D. Biotech-Grad**, R. Kolhatkar and H. Ghandehari. "PEGylation of Anionic PAMAM Dendrimers: Implications for Oral Delivery." Poster presentation, 35<sup>th</sup> Annual Meeting of the Controlled Release Society, New York, NY, July 12-16, 2008.

#### Undergraduate Research Project

Aug. 2007 – Apr. 2010

University of Maryland, College Park, MD

- Completed a competitive, NSF-funded, Research Experience for Undergraduates (REU) summer internship program and then continued research project as an undergraduate research fellow.
- Determined the surface structure and chemistry of DNA-GaAs biochips using Grazing Incidence X-ray Scattering, X-ray Photoelectron Spectroscopy and Atomic Force Microscopy.
- Investigated new application of biochip in biological dosimetry.
- Published manuscript in IEEE: M. Al-Sheikhly, **D. Biotech-Grad**, et al. "Radiation Induced Failure Mechanisms of GaAs Based Biochips," *IEEE Transactions on Device and Materials Reliability*. Vol. 4, No. 2., June 2004.
- Wrote and defended an undergraduate thesis as part of the Engineering Honors Program.

<b>Summer Undergraduate Research Fellowship (SURF)</b> National Institute of Standards and Technology, Gaithersburg, MD	Jun. - Aug. 2007
<ul style="list-style-type: none"><li>• Developed an automated method to convert two-dimensional HIV protease inhibitor chemical structures to three-dimensional animations showcasing inhibitor interactions with protease active site using PyMol software.</li><li>• Created 300 visualizations of HIV Protease-Inhibitor interactions to supplement HIV research database (HIVSDB).</li><li>• Presented results to scientists and peers at SURF Symposium.</li></ul>	

## **WORK EXPERIENCE**

<b>Graduate Teaching Assistant</b> University of Maryland, College Park, MD	Sep. 2013 - May 2014
<ul style="list-style-type: none"><li>• BIOE121: Facilitated laboratory exercises for 40 students in Freshman Bioengineering Laboratory and delivered weekly lectures on engineering and biology topics.</li><li>• BIOE241: Graded 50 homework assignments weekly for Computational Methods in Bioengineering course and answered student questions concerning C and Matlab programming languages.</li></ul>	
<b>Undergraduate Teaching Fellow</b> University of Maryland, College Park, MD	Jan. - May 2008
<ul style="list-style-type: none"><li>• Selected as a Women in Engineering Undergraduate Teaching Fellow.</li><li>• Developed lesson plans for and led a 1.5 hour recitation each week for 30 students in ENCH424, "Mass and Heat Transfer."</li><li>• Held office hours, provided review sessions and proctored exams.</li></ul>	
<b>Clark School Ambassador</b> University of Maryland, College Park, MD	Jan. 2007 - Aug. 2008
<ul style="list-style-type: none"><li>• Served as a student representative for the College of Engineering, responsible for giving presentations and tours to prospective students and parents, visiting local high schools and performing other recruitment duties.</li><li>• Developed curriculum and activities for "Discovering Engineering," a week-long engineering summer camp for middle school students.</li></ul>	

## **LEADERSHIP AND EXTRACURRICULAR ACTIVITIES**

- Tau Beta Pi, National Engineering Honors Fraternity, Inducted 2006.
- Tau Beta Pi, Recording Secretary (2007-2008), Social Chair (2009) and Scholarship Chair (2010).
- Chemical Engineering Chair Search Committee, Undergraduate Representative, 2007-2008.

## **AWARDS**

- National Science Foundation Graduate Research Fellowship, 2010-2013
- A. James Clark School of Engineering Dean's Award, May 2010
- Chemical Engineering Outstanding Senior Award, May 2010
- Phillip Merrill Presidential Scholar, 2009-2010
- American Institute of Chemical Engineers Student Chapter Award, May 2009
- Tau Beta Pi Outstanding Member Award, May 2009
- Barry M. Goldwater Scholarship, 2009-2010

92 Elm Street #6  
Greenbelt, MD 20770

# Michael H. Ph.D.

Cell Phone: 301.555.1234  
Email: [student@umd.edu](mailto:student@umd.edu)

## Education

<b>Ph.D. in Electrical and Computer Engineering, Communication</b>	Expected: 5/2016
University of Maryland, College Park, MD	GPA: 3.91/4.0
<b>M.S. in Electrical Engineering, Control Systems</b>	9/2008
Sharif University of Technology, Tehran, Iran	GPA: 3.81/4.0
<b>B.S. in Electrical Engineering</b>	5/2006
Sharif University of Technology, Tehran, Iran	GPA: 3.78/4.0

## Computer Skills

**Platforms:** UNIX, Linux, DOS, Windows XP/2000/NT, and VAX/VMS

**Languages:** C/C++, Java, MATLAB, Verilog, Assembly and C for Texas Instruments DSP processors, Assembly and C for embedded systems and Intelx 86 Assemblies

**Software:** Network Simulator (**NS2**) GloMoSim, CPLEX, and Qualnet

## Experience

**Graduate Research Assistant**, University of Maryland, ECE Department, College Park, MD 8/2013 - Present

- Conducted research on dynamical behavior of TCP traffic in IP networks, and developed **award winning CDMA Aggregate Perturbation (CAP)** technology as a defense solution for Distributed Denial of Service (DDoS) attacks in the Internet (**C/C++, MATLAB, TCL and NS2 code**).
- Investigated Quality of Service (QoS), Routing, and Topology Control in wireless networks. Initiated a new methodology to formulate data flow in the wireless networks as an electrostatic field propagation problem (**C/C++, MATLAB, Qualnet, code, and simulation of 802.1x standards**).
- Developed system architecture, **Dataflow/RTL**, and **gate level** realization of a pipelined DDoS detection and prevention cell for high speed links in IP networks on a **Xilinx Virtex-II Pro FPGA** chip. Supervised the design group and served as the team leader. (**C/C++ and Verilog code**).
- Led the design team of a library of signal processing blocks in Verilog. Designed and implemented **Dataflow/RTL** and **gate level** realization DSP blocks including FIR and IIR filters.
- Implemented both the transmitter and receiver of a V22bis modem according to the ITU-T recommendations based on the Texas Instruments TMS320C30 DSPs (**C and TI Assembly Code**).

**Control System Design Chief Engineer**, Fan-Niroo Company, Tehran, Iran 8/2008 - 8/2010

- Designed and implemented a control, emergency shutdown and process visualization system. The project included extensive hardware design of digital and analog control boards and implementation of control algorithms, and programming in C/C++ and X86 Assembly.

**Graduate Teaching Assistant**, Sharif University of Technology, Tehran, Iran 9/2006 - 6/2008

- Assisted in teaching of senior level electrical engineering courses, including Signals and Systems, Control System Design, Digital Control and Modern Control.

## Awards and Leadership

- First Place Award of Business Plan Competition**, University of Maryland, 2013. Won the first place award for **MacroPhage Networks** (With Prof. M. Shayman and Dr. M. Alasti).
- Received \$50,000 University Technology Development Fund (UTDF)**, Maryland Technology Development Corporation (TEDCO), 12/2013. (With Prof. M. Shayman).
- President**, University of Maryland Electrical and Computer Engineering Graduate Student Association (ECEGSA), 2012 -2013.
- Dean's Honored Graduate**, Sharif University of Technology, Tehran, Iran, 6/2006.

## US Patent and Invention Disclosure

- *Method for Quantifying Responsiveness of Flow Aggregates to Packet Drops in A Communication Network* (US pending patent number 20040233846).
- *Using Direct Sequence Spread Spectrum to Determine Responsiveness of a TCP Aggregate to Packet Drops*, reported to the Office of Technology Commercialization, University of Maryland, 4/2013, Ref. No. IS-2003-026.

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## Publications

M. Shayman, R. Gahremanpour, R. Skoog, N. Jasinski and M. Ph.D., "Network Management and Control Mechanisms to Prevent Maliciously Induced Network Stability," Proc. 8th IEEE/IFIP Network Operations and Management Symposium (NOMS-2006).

M. Ph.D., K. Gallichio, and M. Shayman, "Mitigation of Denial of Service Attacks in the Internet," Proc. 41st IEEE Conference on Decision and Control (CDC-2005).

M. Ph.D. and M. Shayman, "Routing in Wireless Ad Hoc Networks by Analogy to Electrostatic Theory," Proc. IEEE International Communications Conference (ICC-04).

To see a complete list of publications visit <http://www.mphdfakewebsite.com>.

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## Research Proposals /Grants

**"Routing and Topology Design of Hierarchical Sensor Networks"** With Prof. Mark Shayman, ECE Department of the University of Maryland, Submitted to NSF Sensornet program 1/2012.

**"CDMA-Based Mitigation of Distributed Denial of Service Attacks"** With Prof. Mark Shayman, ECE Department of the University of Maryland, Submitted to NSF NetS program 4/2013.

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## Professional Activities/Affiliations

- Paper Reviewer, INFOCOM 2008
- Paper Reviewer, International Conference on Communication (ICC) 2007 and 2008
- Member, Scientific Research Society (Sigma Xi)
- Student Member, IEEE

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## Graduate Courses

**University of Maryland:** Random Processes in Communications and Control, Multi-User Communication, Wireless Communication, Advanced Discrete Signal Processing, Communication Design Lab, Stochastic Optimization and Control, Digital Communications, Detection and Estimation Theory, Digital Computer Design, CAD of Digital Systems, Mixed Signal VLSI Design, Advanced Digital System Design

**Sharif University of Technology:** Switching Systems, Data Communication Networks, Object Oriented Programming, Neural Networks, Fuzzy Systems and Sets, Adaptive Control, Robotic Manipulators, Applied Industrial Control, Nonlinear and Digital Control, Discrete Signal Processing, Operation Research

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## Additional Information

**In The Media:** "UM Business Plan Competition Could Launch Next Google," 5/3/2013. Received favorable comments about MacroPhage Networks and the CAP technology. Covered by PR Newswire, CBS MarketWatch, NBC, Canada Finance, National Hispanic Corporate Council, and The Gazette.

# ONLINE RESUMES AND JOB APPLICATIONS

An increasing number of employers, including the federal government, require all job candidates to complete an online application at the employer's website. Online applications allow employers to efficiently advertise positions, accept applications, and track candidates through the application and hiring process. While online applications can feel like a "black hole," they are often the best way to get your resume in the right hands, if you put in the time and effort to do them well.

Online applications may include a resume builder that allows you to enter information about your education, work experience, and skills into specific fields, or you may be asked to upload a resume or copy and paste the text of your resume into a text box.

## ONLINE RESUME FORMAT

The primary difference between a standard resume and an online resume is the format. Special formatting does not translate well when pasted into an electronic application.

For that reason, avoid the following formatting in online resumes:

- Bold, italicized, or underlined text
- Bullets or special symbols
- Tabs or columns
- Horizontal and vertical lines
- Tables

Look carefully through each online resume you submit; make sure that it is as legible and reader-friendly as it can be. Remember, your electronic resume may be scanned by software AND read by a human being.

Do	DON'T
University of Maryland	University of Maryland
College Park, MD	College Park, MD <input type="checkbox"/>
B.S., Civil Engineering	B.S., Civil Engineering
Expected May 2017	<input type="checkbox"/> Expected May 2017
GPA: 3.1	GPA: 3.1 <input type="checkbox"/>

## ADDITIONAL TIPS FOR ONLINE APPLICATIONS

- **Incorporate keywords.** Hiring managers will often use a keyword search to find qualified candidates in their database. Read the job description carefully, noting key words and phrases, and incorporate those into your resume.
- **Use spell check.** If the online application does not have a spell check feature, paste your text into another document to make sure that you have not overlooked any typos.
- **Follow up.** If you have met a recruiter at a career fair or information session, contact them by email or phone to express your interest and let them know you have completed the online application. Employer contact information is also available in Career4Engineers.

## SENDING A RESUME VIA EMAIL

- **PDF your resume.** Sometimes your resume may look different on your computer than the employers'. Downloading a free PDF converter and converting your Microsoft Word resume to a PDF, can avoid a formatting mishap.

# **“FEDERALIZING” YOUR PRIVATE SECTOR RESUME**

If you are a U.S. citizen interested in applying for internships, Pathways or full time positions for the U.S. Federal Government, you will need to adapt the resume you created using the guidelines in this handout in order to meet the government’s specific requirements.

## **HOW IS A FEDERAL RESUME DIFFERENT FROM A PRIVATE SECTOR RESUME?**

- A federal resume is very specific to a particular job opening, and requires much more information than is not needed (or that might be in a cover letter) in the private sector.
- It is generally 2-3 pages in length, but can be as many as 5-6 pages, in 11-12 point font.
- Takes into account military experience, past federal experience, and requires more personal information to determine eligibility for positions.
- Your federal resume should include detailed descriptions that focus on projects and achievements and incorporate keywords from the vacancy announcements

## **HOW DO I CREATE A FEDERAL RESUME?**

- When you create an account at <http://USAjobs.gov>, you are given the option to upload or build a resume. *We highly recommend using the Resume Builder.* You can save up to five (5) resumes in your USAJobs account.
- Give yourself plenty of time (3-4 hours) to create your first (template) resume.
- Before you start the resume builder, prepare a copy of your private sector resume that includes the information you will need to add:
  - **Work Experience** –Employer name, mailing address, your job title, dates of employment, salary, and detailed duties and accomplishments (up to 5,000 characters for that last box, so be detailed).
  - **Education** – School name, location, major/ minor, degree seeking or awarded, credits completed, honors awarded upon graduation; relevant coursework, licensures or certifications (up to 2,000 characters). If requested or relevant to the position, you can include high school information.
  - **References** – You may add up to 5 references. Name, Employer, Job Title, Phone and Email. Indicate whether the person is a personal or professional reference.
  - **Job Related Training** – List titles and completion dates of training courses you’ve taken (besides the coursework you listed in Education) that are relevant to the position for which you are applying.
  - **Language Skills** – Indicate proficiency level for speaking, reading, and writing.
  - **Organization/ Affiliation** – List organization name and your role or affiliation if it is relevant to the position. May include volunteer work. No room for details here.
  - **Professional Publications** – academic or industry journal publications, conference proceedings, etc.
  - **Additional Information** – This is where you add other information relevant to the position that did not fit under other categories, such as honors, awards, leadership activities, skills (such as computer software proficiency or typing speed) or any other information requested by a specific job announcement. You have 20,000 characters for this section.
- Paste the information into the resume builder.
- Adapt your resume to include keywords and achievements that match the job announcement.

## **RESOURCES FOR FEDERAL RESUME WRITING**

<http://usajobs.gov>

[http://gogovernment.org/how\\_to\\_apply/write\\_your\\_federal\\_resume/create\\_your\\_resume.php](http://gogovernment.org/how_to_apply/write_your_federal_resume/create_your_resume.php)

<http://www.dhs.gov/tips-writing-federal-resume>

<http://www.archives.gov/careers/jobs/forms/resume-guide.pdf>

## REFERENCES

Although not all employers will ask for references as part of the application, it is a good idea to have a typed list of at least three references available. Then if you are asked for references, you will be prepared.

References may include people such as former supervisors, professors, teaching assistants, or advisors. Choose people who can speak about your skills and abilities. First, ask the people you'd like to use if they can provide a reference for you if necessary. This way you can ensure that your references know to expect calls, and you can provide them with any details about your background and job search that may assist them. It is a good idea to provide your references with an up-to-date copy of your resume and the job description.

How can you build your references? Participating in class and attending office hours to discuss the subject matter, rather than to complain about your grade or ask for extra credit, will help you build a positive professional relationship with faculty. You never know, it may even lead to a research assistant opportunity.

Unless the application specifically asks for a personal reference, do not list a family member or friend as a reference.

### SAMPLE REFERENCE SHEET

<p style="text-align: center;"><b>Jane Doe</b> 1234 Campus Drive • Smalltown, MD 20740 • (123)456-7890 • email@email.com</p> <p><b>References</b></p> <p>Mr. David Steel Branch Manager Chevy Chase Bank 1341 Cherry Hill Road College Park, MD 20742 (301) 555-0123 <a href="mailto:dsteel@ccbank.com">dsteel@ccbank.com</a> (Supervisor at 123 Bank)</p> <p>Dr. Ellen Setcher Asst. Professor Department of Civil Engineering University of Maryland 1143 Glenn L. Martin Hall College Park, MD 20742 (301) 405-1234 <a href="mailto:esetcher@umd.edu">esetcher@umd.edu</a> (Academic Advisor)</p> <p>Dr. Arthur Strauss Assistant Professor Department of Civil Engineering University of Maryland 1156 Glenn L. Martin Hall College Park, MD 20742 (301) 405-4321 <a href="mailto:astrauss@umd.edu">astrauss@umd.edu</a></p>	<p>Former supervisors, even if not from an engineering job, are good choices for references. Consider asking an advisor or professor you know well to serve as a reference for you.</p> <p>For each reference, include the:</p> <ul style="list-style-type: none"><li>- Full Name &amp; Current Title</li><li>- Work Mailing Address</li><li>- Email and Phone Number</li></ul> <p>You can also include a short statement of how you know the person.</p>
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