

# College of Engineering

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# PAULA E. MERR (she/her)

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## EDUCATION

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**Carnegie Mellon University** | Pittsburgh, PA May 20XX  
Bachelor of Science in Chemical Engineering, Additional Major in Biomedical Engineering  
GPA: 3.20/4.00 | Dean's List 2 semesters

## EXPERIENCE

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**Eli Lilly and Company** | Cambridge, MA Summer 20XX  
Academic Intern, Protein Purification

- Investigated new purification scheme nominated as one of Eli Lilly's Top 100 Innovations of 2017; to be published with co-authorship
- Conducted IMAC, Prot A/G, SEC purifications, leading to findings for 3 new protein structures

**Merck & Co.** | West Point, PA Summer 20XX  
Technical Operations Intern

- Performed process monitoring & statistical analysis on quality critical alarm in vaccine production bioreactors to resolve impact on batches, saving nearly \$40,000 in losses

## RESEARCH

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**Carnegie Mellon Cook Research Lab** | Pittsburgh, PA August 20XX – May 20XX  
Undergraduate Researcher

- Aided in fabrication of mini artificial lung devices for rabbits, as an early test model for human lung transplant, through creation of PDMS fiber pathways within device chamber to facilitate gas exchange & fluid flow
- Performed centrifugation/injection molding techniques to create silicone caps allowing for a gas flow entry point

Carnegie Mellon Biomolecular Chemical Engineering Labs | Pittsburgh, PA August 20XX – May 20XX  
**Micelle Electrokinetic Chromatography with miRNA Sandwich Hybridization**

- Improved readings of capillary electrophoresis through surfactant buffers formulation & DNA-tagging with micelle end labels. 20XX Undergraduate Research Grant

## PROJECTS

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Bayer: Smart Pressure Jacket for CT Contrast Fluid Autoinjector, Team Lead Fall 20XX – Spring 20XX

- Biomedical design and development of injectable systems to improve consumer safety

3D-Chocolate Printing Spring 20XX

- Improving upon 3D Printing of chocolate based on rheological and thermodynamic properties

## RELEVANT COURSEWORK

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CHEMICAL REACTION ENGINEERING	TRANSPORT PROCESSES LAB	HEAT AND MASS TRANSFER
CHEMICAL ENG. PROCESS CONTROL	BIOMEDICAL ENG. DESIGN	CHEMICAL PROCESS DESIGN
OPTIMIZATION MODELS AND ALGORITHMS	BIOCHEMISTRY	CHEMICAL PROCESS SYSTEMS DESIGN
THERMODYNAMICS I & II	CHEMICAL PRODUCT DESIGN	SURGERY FOR ENGINEERS

## LEADERSHIP, SKILLS & ACTIVITIES

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LABORATORY: 3D printing, UV-Vis Spectrophotometry, protein purification, animal model testing  
SOFTWARE/APPLICATIONS: MATLAB, Python, MS Office, Aspen, CAD (Solidworks & Fusion 360)  
ACTIVITIES: Biomedical Engineering Society (Member), American Institute of Chemical Engineers (Member)  
LEADERSHIP: Society of Women Engineers - Mentoring Chair, ABLE CMU – Events Chair

# PAULA E. MERR

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## EDUCATION

### Carnegie Mellon University

Bachelor of Science in Chemical Engineering  
Secondary Major in Biomedical Engineering  
GPA: 3.15/4.00

Pittsburgh, PA  
May 20XX

### San Francisco High School

High School Diploma  
GPA 3.82/4.00

San Francisco, CA  
June 20XX

## PROJECTS

### Capsaicin Analysis Project, Chemistry Lab

Spring 20XX

- Designed and performed an experiment to determine the quantity of capsaicin in peppers and salsas using reversed-phase HPLC.
- Presented findings to a class size of 50+ students to educate them on the critical components of the process.

### Chemical Engineering Filtration System

Fall 20XX

- Partnered with a team of 4 other students to design a filtration system to remove dye from water, increasing water safety.
- Identified new, cost-effective materials and reduced operating costs by 3%.

## WORK EXPERIENCE

### Carnegie Mellon University Career Center

Pittsburgh, PA

Career Peer Mentor

Spring 20XX – Present

- Conduct 1-on-1 resume reviews with first-year students to educate them on resume formatting and content creation.
- Create career-related handouts and research tools to facilitate internship searches.

### YMCA Camp

San Jose, CA

Camp Counselor

Summers 20XX – 20XX

- Coordinated the daily activities of 22 children to encourage social learning.
- Collaborated with other camp counselors to plan weekly events.

## LEADERSHIP & ACTIVITIES

### Vice President, American Institute of Chemical Engineers

20XX – Present

- Organize monthly speaker series featuring corporate and alumni panelists.
- Engage 150 members to attend events with marketing and social media campaigns.

Society of Asian Scientists & Engineers

20XX – Present

American Institute of Chemical Engineers

20XX – Present

## SKILLS & HONORS

Laboratory: HPLC, Organic Synthesis & Purification, Gas Absorber, Rheometer

Computer: MathCAD, MATLAB, SIMULINK, ImageJ, AutoSketch, MS Office

Spoken Languages: Fluent in Spanish; Conversant in French

Honors: College of Engineering Dean's List (Spring 20XX), Andrew Carnegie Scholarship (Fall 20XX – Present)

Valedictorian - San Francisco High School (June 20XX)

# PAULA E. MERR

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## EDUCATION

**Carnegie Mellon University** | Pittsburgh, PA  
Bachelor of Science in Chemical Engineering  
GPA: 3.20/4.00 | Dean's List 2 semesters

May 20XX

## EXPERIENCE

**Quality Intern** - Laboratory Quality Assurance  
Merck & Co. | West Point, PA

Summer 20XX

- Analyzed 7 months of capacity data for 26 LQA employees to quantify work in terms of units and hours
- Visualized capacity management data to allow Quality Leadership Team to connect work allocation to profit plan

### **Undergraduate Researcher**

Summer 20XX

Summer Undergraduate Research Fellowship (SURF), Carnegie Mellon | Pittsburgh, PA

- Measured biocompatibility of iron nanomaterials with various coating combinations in cancer cells
- Gained experience in cancer research, nanotechnology, biomaterials, and professional research practice

**Career Peer Mentor** | Career & Professional Development Center

Fall 20XX - Present

- Host weekly professional development workshops in first year residence halls, conduct resume reviews, provide information about useful resources, and perform administrative tasks

## PROJECTS

### **Chemical Process System Design**

Fall 20XX

- Developed preliminary design of a chemical process in a team of 3 to convert ethane into fuel grade ethanol
- Conducted a literature review of ethylene hydration, considered alternative methods for the process, and analyzed economic feasibility

### **Osmotic Dehydration: Modeling Fick's Second Law with Pineapples**

Spring 20XX

- Planned a mass transfer and osmotic dehydration experiment in a team of 4, measuring water loss & sugar gain, for various sucrose solution concentrations over different time periods using a mathematical model from literature

### **Analysis of Theobromine, Theophylline, and Caffeine Content**

Spring 20XX

- Designed experiment in a team of 3 to determine percentage of methylxanthines in various chocolate samples
- Performed trials for reverse phase High Performance Liquid Chromatography and titrations to reduce variability

## LEADERSHIP & ACTIVITIES

Society of Women Engineers | **Technical Opportunities Conference Co-Director**

Spring 20XX - Present

- Recruited, interviewed, and selected 8 undergraduates for one of 3 TOC planning committees
- Delegated appropriate responsibilities to each committee, led progress meetings, and executed logistical tasks to plan a three-day career fair for 284 companies

National Society of Black Engineers | Member

Fall 20XX - Present

CMU PRISM | Member

Spring 20XX - Present

## SKILLS & HONORS

LABORATORY: Unit Operations, Transport Processes, Analytical Chemistry Techniques

INSTRUMENTS: Ultraviolet-visible Spectrophotometer, High Performance Liquid Chromatography

SOFTWARE/APPLICATIONS: MatLab, Aspen, Python, MS Office, Adobe Suite, SolidWorks, AutoCAD

HONORS: Tau Beta Pi - Engineering Honor Society, Andrew Carnegie Scholarship

# BRIDGET SPECTOR

Email: bspector@andrew.cmu.edu | Cell: (123) 456-7890 | pronouns: she/her | linkedin.com/bridgetspector

## EDUCATION

### Carnegie Mellon University

Bachelor of Science in Civil Engineering  
GPA: 3.15/4.00

Pittsburgh, PA  
May 20XX

### Pittsburgh High School

High School Diploma  
GPA 3.5/4.00

Pittsburgh, PA  
June 20XX

## PROJECTS

### Cardboard Structure, Intro to Structural Engineering

Spring 20XX

- Designed and constructed a cardboard bridge, using AutoCAD, meant to support the average adult male.
- Prepared scale models for analysis of alternatives prior to final test, and presented top 3 options to a class of 50+ students.

### Traffic Light Timing

Fall 20XX

- Conducted traffic-flow studies through three intersections on Forbes Avenue through weekly observation and recordings.
- Collected and analyzed 3 months' worth of data, and designed alternative traffic light cycles with increased efficiency.

## WORK EXPERIENCE

### Desk Attendant, Carnegie Mellon Fitness Center

Spring 20XX – Present

- Managed daily administrative operations for the CMU Fitness Center to enable an organized environment for guests.
- Developed a new process to track frequency of equipment cleanings, ensuring that all equipment met pre-established cleanliness standards.

### Happy Valley Camp

#### Camp Counselor

Pittsburgh, PA  
Summers 20XX – 20XX

- Coordinated the daily activities of 22 children to encourage social learning.
- Collaborated with other camp counselors to plan weekly events.

## LEADERSHIP

### Secretary, American Society of Civil Engineers (ASCE)

20XX – Present

- Document monthly meeting notes and communicate relevant updates to 30+ members, ensuring that all members are informed and clear on group priorities.

## SKILLS

Computer: Microsoft Office, AutoCAD, MathCAD, MS Project

Spoken Languages: Fluent in Spanish; Conversant in French

## ACTIVITIES

Society of Women Engineers

20XX – Present

American Society of Civil Engineers

20XX – Present

## HONORS

College of Engineering Dean's List (GPA 3.75 and above)

Spring 20XX

National Honor Society, Pittsburgh High School

June 20XX

# BRIDGET SPECTOR

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## EDUCATION

**Carnegie Mellon University** | Pittsburgh, PA  
Bachelor of Science in Civil Engineering  
GPA: 3.30/4.00 | Dean's List 2 semesters

May 20XX

## EXPERIENCE

### Civil Engineering Intern

Duquesne Light Company | Pittsburgh, PA

Summer 20XX

- Created reference databases in GIS for engineering clearance letters and soil boring drawings to be used before construction of new structures; presented how to access and use databases to management
- Designed replacement concrete cantilevered retaining wall for transmission tower foundation
- Collaborated with technicians to revise and update drawings in database
- Aided in design of structures and poles for emergency transmission line failure using NESC clearances

**Teaching Assistant** | Civil & Environmental Engineering Department

Spring 20XX

- Teaching Assistant (TA) for Soil Mechanics course comprised of 29 undergraduate students
- Created homework solution sets, managed a team of 3 graders, held office hours 2x/week
- Aided in drafting, reviewing, and proctoring exams, as well as all other course materials

## PROJECTS

### Steel Bridge Senior Design

Fall 20XX

- Worked in group of 10 to design a 20-ft steel bridge to a 2,500-pound static load
- Performed extensive load and deflection calculations for all structural members
- Executed partial life-cycle analysis on carbon equivalence of raw materials

### CMU ANSYS Building - Estimating and Scheduling Project

Fall 20XX

- Prepared bid estimate as concrete subcontractor, by extracting quantities from 2D drawings as well as cost data from RS Means database, for submission to general contractor
- Performed project manager duties such as developing a detailed schedule of concrete work for ANSYS building

## LEADERSHIP & ACTIVITIES

**Manager** | Carnegie Mellon Booth Competition

Spring 20XX

- Led a team of 60 students over a three-month period in creating, designing, and building a 20' x 15' x 18' booth
- Organized with five project leaders to develop interactive and educational components for the booth's interior coinciding with event-wide theme

**Resident Assistant** | Office of Residential Education

Fall 20XX - Spring 20XX

- Coordinated with a team of six staff members to create an engaging community through house events
- Provided support, instruction on programs and resources, and emergency response for 40 first year residents

Member | American Society of Civil Engineers

Fall 20XX - Present

Member | Society for Hispanic Professional Engineers

Spring 20XX - Present

## SKILLS & HONORS

FIELD: Project management, bridge design, bid estimating, soil mechanics, geotechnical engineering

SOFTWARE: Python3, MATLAB, AutoCAD, BlueBeam Revu, SolidWorks

LANGUAGES: English (fluent), Spanish (fluent), Portuguese (conversational)

HONORS: Andrew Carnegie Scholarship

# SUSIE SUSTAINABLE

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## EDUCATION

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**Carnegie Mellon University** | Pittsburgh, PA May 20XX  
Bachelor of Science in Environmental Engineering, Additional Major in Engineering & Public Policy  
GPA: 3.45/4.00 | Dean's List 2 Semesters

## RELEVANT EXPERIENCE

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**National Grid** | New York, NY Summer 20XX  
Strategic Business Intern

- Analyzed strategies to help electric and gas customers improve energy efficiency
- Developed strategic water and wastewater utility programs to reduce energy consumption
- Compiled and reported on State agency conferences to identify emerging energy regulations

Carnegie Mellon Department of Civil and Environmental Engineering | Pittsburgh, PA Summer 20XX

### Summer Undergraduate Research Apprentice

- Designed a project to test the structural strength of environmentally sustainable concrete
- Performed independent review of technical literature, such as research papers and journal articles, to identify best practices in scholarly work on sustainable building materials and biocomposites

## PROJECTS

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**Low-Income Housing Energy Efficiency Improvements** Spring 20XX  
• Designed a policy proposal to improve insulation efficiency in low-income households

**Analysis of Pittsburgh Water Quality** Fall 20XX

- Conducted water and waste water quality tests in 5 Pittsburgh neighborhoods across 14 week time period
- Analyzed data to provide recommendation for neighborhoods with lowest quality and high-priority intervention

## LEADERSHIP, SERVICE & ACTIVITIES

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Member | **Engineers Without Borders** Fall 20XX - Present  
• Participated in trip to various developing African nations with group of 10+ to provide wastewater and drinking water solutions through sustainable practices

**Secretary** | Sustainable Earth August 20XX - Present  
• Dictate meeting minutes, distribute to group of 40+ members and schedule monthly meetings throughout academic year

Member | American Society of Civil Engineers Fall 20XX - Present

Member | Engineering Student Council Fall 20XX – Present

Member | CMU PRISM Spring 20XX - Present

## COURSEWORK

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CLIMATE CHANGE MITIGATION	ENERGY & THE ENVIRONMENT	COMBUSTION & AIR POLLUTION CONTROL
AIR QUALITY ENGINEERING	SUSTAINABLE ENERGY FOR THE DEVELOPING WORLD	CLIMATE SCIENCE & POLICY
FUNDAMENTALS OF WATER QUALITY ENG	ENGINEERING STATS & QUALITY CONTROL	ENVIRONMENTAL ENGINEERING

## SKILLS

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FIELD: Project management, environmental engineering, soil mechanics, geotechnical engineering, fluid mechanics

SOFTWARE: Python3, MATLAB, AutoCAD, BlueBeam Revu, Solid Works

LANGUAGES: English (fluent), German (basic)

# DAT A. STRUCTURES

[ece@andrew.cmu.edu](mailto:ece@andrew.cmu.edu) 412.889.4600 (Cell)

U.S. Citizen

## EDUCATION

**CARNEGIE MELLON UNIVERSITY** Pittsburgh, PA  
Bachelor of Science in Electrical and Computer Engineering MAY 20XX  
Overall GPA: 3.37/4.00

**NASHUA HIGH SCHOOL** Nashua, NH  
High School Diploma JUNE 20XX  
Overall GPA: 3.80/4.00  
Rank: 5/196

## RELEVANT COURSES

Electrical and Computer Engineering\*    Mechanical Engineering and Physics  
Differential Equations    Introduction to Data Structures \*  
Calculus in Three Dimensions    \* Spring 20XX

## SKILLS

**Programming Languages:** Python, JavaScript, CoffeeScript, JSON, C, SML, Java, HTML  
**Operating Systems:** Windows 8.1/10, MacOS X, UNIX  
**Software:** Microsoft Office, Matlab, Mathematica  
**Spoken Languages:** Spanish

## PROJECTS

**Robot**, Robotics Institute Spring 20XX

- Constructed smaller circuits using a protoboard to power a beeper, LED, clock, memory chip, and two motors
- Combined circuits to create a mini programmable robot
- Programmed the robot to successfully complete a test course

**15-112 Term Project** Fall 20XX  
Strategy game implemented in Python based on Sid Meier's Civilization

- Functional opponent AI, resource gathering, civilization building, combat

## WORK EXPERIENCE

**O'CONNOR IRRIGATION** Nashua, NH  
**Irrigation System Installation Workman** Summer 20XX

- Assisted Senior Associate with plumbing, head installation, Ditch Witch, trench digging, wiring, and programming
- Developed schematics using proper measurements and gauges
- Applied and spread appropriate amounts of loam and grass seed post-installation

## ACTIVITIES

**Varsity Soccer**, Carnegie Mellon University August 20XX - present  
**Intramural Softball**, Carnegie Mellon University 20XX  
**Intramural Doubles Table Tennis**, Carnegie Mellon University 20XX  
**National Honor Society Secretary**, Nashua High School 20XX - 20XX  
**Varsity Club President**, Nashua High School 20XX  
**Varsity Soccer Captain**, Nashua High School 20XX  
**Intramural Table Tennis Manager**, Nashua High School Spring 20XX

## HONORS

Dean's List, College of Engineering: Fall 20XX  
Massachusetts Institute of Technology Book Award: 20XX  
U.S. Marines Scholarship, 20XX  
Who's Who Among American High School Students: 20XX, 20XX, 20XX



# SOFIE WARE (SHE, HER)

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U.S. Citizen

## EDUCATION

**CARNEGIE MELLON UNIVERSITY** Pittsburgh, PA  
Bachelor of Science in Electrical and Computer Engineering MAY 20XX  
Minor: Chinese Studies  
Overall GPA: 3.4/4.00

## COMPUTER SKILLS

**Programming Languages:** C/C++, Java, Python, System Verilog, Verilog, MATLAB  
**Software:** Git, MS Office, SolidWorks, AutoCAD, Revit, AGI32, Cadence  
**Operating Systems:** Apple Macintosh OSX, Microsoft Windows OS, Linux Ubuntu  
**Foreign Languages:** Mandarin (Chinese)

## WORK EXPERIENCE

**CARNEGIE MELLON UNIVERSITY CYLAB** Pittsburgh, PA  
**Summer Research Software Intern** Summer 20XX

- Accomplished autonomous flight using GPS Waypoints for A.R. Drone 2.0
- Assisted in human detection algorithms using thermal camera
- Contributed to long-range radio drone-to-drone communications

**M.C. DEAN** Dulles, VA  
**Design Engineer Intern** Summer 20XX

- Designed lighting circuits in 2 current projects using AutoDesk, AutoCAD & Revit
- Performed lighting calculations and analysis using AGI32
- Conducted over 20 pages of takeoffs for cost analysis
- Corrected over 30 pages of lighting diagrams and circuiting

**GENERAL DYNAMICS INFORMATION TECHNOLOGY** Fairfax, VA  
**Technical Summer Intern** Spring 20XX

- Developed desktop virtualization solutions for 2 government contracts
- Involved in pitching Email as a Service (EaaS) to 3 U.S. government agencies
- Performed a market analysis in the Federal Space for Cloud technology and desktop virtualization solutions

**CARNEGIE MELLON UNIVERSITY** Pittsburgh, PA  
**Computing Skills Course Instructor, Computer Education** August 20XX – May 20XX

- Instructed required computer skills course for incoming freshmen
- Worked with and evaluated students to promote maximum computing utilization

## PROJECTS

**Road Sign Recognition**, Digital Communication & Signal Processing System Design Spring 20XX

- Designed and implemented a road sign recognition algorithm on a TI C67 DSP
- Presented project at the Carnegie Mellon Undergraduate Research Symposium

**Analog Circuit Design and Analysis**, Electronic Devices and Analog Circuits Fall 20XX

- Participated in a series of hands-on labs to build and operate analog circuits
- Gained experience in circuit and component modeling, amplifiers, filters and signal detection and processing

## LEADERSHIP

**OM – Spiritual Organization**, President Apr. 20XX – present, Secretary: Jan. 20XX – Mar. 20XX  
**Office of the Dean of Student Affairs**

- Planning Committee, Take Our Children to Work Day August 20XX – present
- Volunteer, Niteline Information Resource/ Crisis Control Phone Line August 20XX – present
- Planning Committee, Mosaic Annual Conference on Women's Issues 20XX – 20XX

**Society of Women Engineers**, Annual Winter Semi-formal Chair April 20XX – March 20XX

## HONORS

Dean's List, College of Engineering Fall 20XX  
Sony Scholarship 20XX

# COMP O. SITE

(THEY, THEM, THEIRS)

[mse@andrew.cmu.edu](mailto:mse@andrew.cmu.edu) 412.889.4600 (Cell)

U.S. Citizen

## EDUCATION

**CARNEGIE MELLON UNIVERSITY** Pittsburgh, PA  
Bachelor of Science in Materials Science and Engineering  
Overall GPA: 3.31/4.00  
May 20XX

**AUSTIN HIGH SCHOOL** Austin, PA  
Diploma  
GPA: 3.95/4.00  
June 20XX

## RELEVANT COURSES

Intro to Materials Science and Engineering      Transport of Materials  
Calculus in 3D      Advanced Programming in Java  
Physics I, II for Engineers      Structures of Materials

## SKILLS

**Applications:** MATLAB, Minitab, Labview, MathCAD, Java, Python, MS Office  
**Instruments:** Furnace, Optical Microscope  
**Spoken Languages:** Conversant in Spanish

## WORK EXPERIENCE

**CARNEGIE MELLON**, Pittsburgh, PA  
**Research Assistant, Materials Science and Engineering**      August 20XX - present

- Evaluate the surface properties of various AL finishes
- Perform ongoing mechanical testing and analysis

**AJAX PLUMBING**, Austin, PA  
**Irrigation System Installation Workman**      Summer 20XX

- Assisted Senior Associate with plumbing, head installation, Ditch Witch, trench digging, wiring, and programming
- Developed schematics using proper measurements and gauges
- Applied and spread appropriate amounts of loam and grass seed post-installation

## PROJECTS

**Synthesis of Titanomagnetite**, Phase Diagrams and Relations      Fall 20XX

- Used and created precursors, such as ulvospinel, to synthesize a titanomagnetite and analyze the properties of two different compositions to simulate the behavior of materials on Mars

## ACTIVITIES

**Varsity Soccer**, Carnegie Mellon University: 20XX - present  
**Intramural Softball**, Carnegie Mellon University: 20XX - present  
**Intramural Doubles Table Tennis**, Carnegie Mellon University: 20XX  
**Society of Hispanic Professional Engineers**, Carnegie Mellon University: 20XX - 20XX  
**Varsity Soccer, Captain** (20XX), Austin High School: 20XX - 20XX

## HONORS

Dean's List, College of Engineering: Spring 20XX  
Austin High School Mathematics Award: 20XX  
Massachusetts Institute of Technology Book Award: 20XX  
U.S. Marines Scholarship: 20XX

# Comp O. Site (She, Her, Hers)

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U.S. Citizen

## EDUCATION

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**Carnegie Mellon University**, Pittsburgh, PA

B.S. in Materials Science and Engineering

May 20XX

Minors in Manufacturing Engineering and Photography & Digital Imaging

GPA 3.42/4.0

## WORK EXPERIENCE

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**Power Superconductor Applications Corp.**, New Castle, PA

Summer 20XX

*Laboratory Specialist Grade IV*

- Utilized engineering software such as LabView, MathCAD, and AutoCAD
- Constructed testing apparatus and tested Linear Induction Motors and Transverse Flux Machines
- Led research initiative on the use of Cryogenic Aluminum hyperconductor in company products
- Contributed to published paper: Kuznet, Levy, Wilson. "Development of High-Field Transverse Flux Induction Drive for Ordnance Handling on Navy Ships and Industrial Conveyors" *4th Int. Sym. Linear Drives for Industry Apps.*
- Participated in writing government proposals and travel to Wright Patterson Air Force Base, NIST, NRL, and ONR to meet with partners and clients

**Carnegie Mellon University, Undergraduate Research**

*Research Assistant, The effect of surface texture on formability in Aluminum sheets*

Spring 20XX

- Designed templates for a photolithography process to texture Aluminum sheets
- Performing ongoing mechanical testing and analysis

*Research Assistant, Grain Boundary Movement in Thin Films of Aluminum*

Spring 20XX

- Produced images from TEM negatives in a black and white darkroom
- Traced grain boundaries by hand to track movement and wrote original paper on hand tracing techniques

**National High Magnetic Field Laboratory**, Tallahassee, FL

Summer 20XX

*Research Intern, Topic: Superconducting Material Magnesium Diboride*

- Improved production for pure MgB<sub>2</sub> by refining heat treatments
- Operated SQUID magnetometer and ran X-Ray Diffraction tests
- Interpreted results, wrote an original paper, and presented research to scientists, staff, and peers

## ACADEMIC PROJECT

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**Materials Science Capstone Course, Senior Group Project**

Fall 20XX

*Deformation of Amorphous Metallic Ribbon for use in Magnetic Core Applications*

- Performed magnetic, compositional, and structural analysis on cores donated from Spang Magnetics
- Designed a billet and performed hot extrusion of a wound core at WPAFB to reduce the ribbon thickness
- Cast an amorphous rod and amorphous metallic ribbon for comparative analysis

## SKILLS

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Applications: MATLAB, Adobe Photoshop, Minitab, LabVIEW, MathCAD, Java, MS Office

Instruments: Scanning Electron Microscope (SEM), X-Ray Diffraction (XRD), SQUID Magnetometer, Differential Scanning Calorimetry (DSC), Differential Thermal Analysis (DTA), UV-Vis spectrophotometer, Vickers Hardness Testing, Charpy Testing, Polishing, Melt Spinning, Photography and Black and White Darkroom, Color Photography Darkroom, Soldering

## LEADERSHIP AND HONORS

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Resident Advisor, CMU Apartments

20XX- 20XX

National Society of Collegiate Scholars

20XX-20XX

National Society of Black Engineers

20XX-20XX

Student Action Committee, MSE

20XX-20XX

# Manny Facture

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## EDUCATION

**Carnegie Mellon University** | Pittsburgh, PA

Bachelor of Science in Mechanical Engineering | May 20XX

Additional Major in Engineering & Public Policy

Overall GPA: 3.0/4.0

**New York High School** | New York, NY

High School Diploma | GPA 3.82/4.0 | June 20XX

## PROJECTS

**Mechanical Crane Project** | Spring 20XX

- Built a mechanical crane using a truss structure to lift a weight to a pre-determined height, with size, stress and weight constraints [Team of 4]

**Truss Project** | Fall 20XX

- Designed an acrylic truss in Solidworks that would fail at a specific load and used laser cutter to construct
- Compared analytical computations with two iterations of test results [Team of 3]

**Robot Project** | Fall 20XX

- Programmed a mini-robot to follow a line, complete a course, and stop a fixed distance before an obstacle
- Coded actuators and ultrasonic sensors with an Arduino [Team of 3]

**Mini-Buggy** | Fall 20XX

- Prototyped airfoil using Solidworks, evaluating effects of shape on drag coefficients in software
- Fabricated prototype using 3D printing and analyzed wind tunnel test data [Team of 3]

## WORK EXPERIENCE

**Athletics Office, Carnegie Mellon University** | Student Receptionist | Summer 20XX-present

- Answer telephone and route calls as appropriate; complete projects for staff, such as organizing data in Excel

**Happy Summer Camp** | Camp Counselor | Springfield, NJ | Summer 20XX

- Created and coordinated activities for ten campers 10-12 years old
- Negotiated disputes between campers and helped to set-up for parents weekend

## LEADERSHIP

**Vice-President, Society of Hispanic & Professional Engineers (SHPE)** | Spring 20XX-present

- Organize monthly speaker series, which has seven corporate and alumni presenters

**Treasurer, Yearbook Club, New York High School** | 20XX-20XX

- Managed the finances for the organization with a budget of \$5,000

## SKILLS

**Software:** Microsoft Office, MATLAB, Solidworks, Creo Pro/E, Autodesk Inventor

**Machines:** Mill, Lathes, Drill Press, Band Saw

**Languages:** Fluent in Spanish; Conversant in French

## ACTIVITIES & HONORS

Alpha Phi Omega Service Fraternity, Fall 20XX-present

Intramural Sports: Softball, Volleyball, Fall 20XX-present

Orchestra, New York High School, 20XX-20XX

College of Engineering Dean's List (GPA 3.75 and above), Fall 20XX

# MANNY FACTURE

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Portfolio: mannyfacture.com

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## EDUCATION

**Carnegie Mellon University**, Pittsburgh, PA  
Bachelor of Science in Mechanical Engineering, May 20XX  
Additional Major in Biomedical Engineering  
Overall GPA: 3.0/4.0

## RELEVANT EXPERIENCE

**Procter & Gamble Manufacturing Company, Engineering Intern**, Lima, OH, Summer 20XX

- Conducted 10 line trials to determine plant capability and made recommendations for noise mitigation
- Implemented a daily management system for managing scrap in order to reduce weekly accumulation

## PROJECTS

**Head Mechanic and Buggy Chairperson, Pi Kappa Alpha Fraternity**, Fall 20XX-present

- Customized and built a gravity racer, out of composite materials, for annual University racing competition
- Managed team of mechanics and decreased race time by more than 5 seconds with design of new steering

**Suitcase with Vacuum Pump, Design II**, Fall 20XX

- Developed and built a suitcase with a vacuum pump that removed excess air to increase packing capacity by up to 50%, allowing travelers more personal items per trip

**Temperature Controlled Shipping Unit**, Spring 20XX

- Designed and analyzed with FEA a shipping container to bring a biospecimen container to 4°C within 10 minutes
- Devised the system to function in 60°C ambient temperature

**Swinging Gripper, Design I**, Fall 20XX

- Led a team of 5 people to create a robotic gripper to use a small motor torque to hold onto billiards ball through one full swinging motion
- Constructed a 3D representation of gripper in SolidWorks and ran successful stress simulation on model

**Astronaut's Coat Rack, Design I**, Fall 20XX

- Designed a coat rack with mass and support constraints to sustain a load in space
- Created a design to carry 3 times required load with an acrylic structure, weighing less than 10 grams

## RELEVANT COURSES

Manufacturing Sciences	Mechanical Systems Experimentation	Fuel Cell Systems
Cellular Mechanics	Engineering Statistics and Quality Control	Engineering Graphics

## LEADERSHIP

**Vice-President, NSBE (National Society of Black Engineers)**, Spring 20XX-present (Member since Fall 20XX)

- Organize monthly executive board meetings and coordinate Membership Sub-Committee

## ADDITIONAL EXPERIENCE

**Carnegie Mellon University, Desk Attendant**, Pittsburgh, PA Fall 20XX-Spring 20XX

- Checked students' identification and talked with students to ensure the safety of 75 residence hall students

## SKILLS

**Software:** Microsoft Office, MATLAB, Solidworks, Creo Pro/E, Autodesk Inventor, ANSYS, ADAMS

**Machines:** Mill, Lathes, Drill Press, Band Saw

**Spoken Languages:** Fluent in French; Conversant in Spanish

## ACTIVITIES & HONORS

Pi Kappa Alpha Fraternity, Fall 20XX-present  
Student-Athlete, Men's Track and Field Team, Carnegie Mellon, Spring 20XX-present  
American Society of Mechanical Engineers (ASME), Fall 20XX-present  
College of Engineering Dean's List (GPA 3.75 and above), Fall 20XX

# MECKIE D. ZINE

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Portfolio: meckiedzine.com

Cell: 123.555.4567

## EDUCATION

**Carnegie Mellon University** | Pittsburgh, PA

Bachelor of Science in Mechanical Engineering | May 20XX

Additional Major in Robotics

GPA: 3.0/4.0

## RELEVANT EXPERIENCE

**Procter & Gamble Manufacturing Company**

Engineering Intern | Lima, OH | Summer 20XX

- Conducted line trials to determine plant capability and made recommendations for noise mitigation
- Implemented a daily management system for managing scrap in order to reduce weekly accumulation

## PROJECTS

**Robotic Arm (Independent Project)** | Fall 20XX-present

- Created and manufactured device in order to help children safely reach for and carry objects

**Suitcase with Vacuum Pump, Design II** | Fall 20XX

- Developed and built a suitcase with a vacuum pump that removed excess air to increase packing capacity by up to 50%
- Innovative design allowed travelers to bring more personal items

**Temperature Controlled Shipping Unit** | Spring 20XX

- Designed and analyzed with FEA a shipping container that can bring a biospecimen container to 4°C within 10 minutes
- Devised the system such that it is functional in 60°C ambient temperature

**Swinging Gripper, Design I** | Fall 20XX

- Led a team of five people to create a robotic gripper that used a small motor torque to hold onto a billiards ball through one full swinging motion
- Constructed a 3D representation of the gripper in SolidWorks and ran stress simulation on the model

**Astronaut's Coat Rack, Design I** | Fall 20XX

- Designed a coat rack with mass and support constraints to sustain a load in space
- Created a design that could carry three times the required load with an acrylic structure that weighs less than 10 grams

**Head Mechanic and Buggy Chairperson, Alpha Beta Fraternity** | 20XX-present

- Customized and built a gravity racer, out of composite materials, for annual University racing competition
- Decreased race time by more than 5 seconds with design of new steering

## LEADERSHIP

**Vice-President, American Society of Mechanical Engineers (ASME)** | Spring 20XX-present

- Organize monthly speaker series, which has seven corporate and alumni presenters

**Treasurer, Alpha Beta Fraternity** | Fall 20XX-Spring 20XX

- Managed \$4,500 in funds for 32 members and kept records of all activities

## SKILLS

### Software

Adobe CC

Illustrator

Solidworks

Creo Pro/E

ANSYS

### Programming

Python

Arduino

MATLAB

Mathematica

### Hands-on

Mill

Lathe

Band Saw

CNC Machines

3D Printer

Laser Cutter

Soldering

## ACTIVITIES & HONORS

Alpha Phi Omega Service Fraternity

Fall 201XX-present

Robotics Club

Fall 20XX-present

National Society of Black Engineers

(NSBE)

Spring 20XX-present

Habitat for Humanity

Volunteer

Summer 20XX, 20XX

Student-Athlete | Women's Soccer

Team, CMU

Fall 20XX-present

College of Engineering Dean's List

[GPA 3.75 and above]

Fall 20XX