

Michelle Zhuang

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EDUCATION

Swarthmore College, Swarthmore, PA

May 2023

Anticipated BS Engineering and BA Computer Science Double Major – GPA: 3.8/4.0

- **Relevant Engineering and Computer Science Courses:** Data Structures and Algorithms, Numerical Methods, Computer Architecture, Linear Physical Systems Analysis, Intro to Computer Systems, Fundamentals of Embedded Systems, Computer Vision, Mobile Robotics, Linear Algebra, Multivariable Calculus

Technical Skills:

- **Languages:** Python, Java, C, C++, JavaScript, HTML, CSS, Verilog, MIPS and x86 assembly language
- **Data Analysis:** R, SQL/MySQL, Tableau, Stata, Matlab,
- **Misc/Tools:** Microsoft Office Suite, Google Suite, Autodesk Fusion 360, Kafka, Docker

PROGRAMMING & DATA ANALYTICS PROJECTS

Feature Tracing and Projection Project, *Swarthmore College*, Swarthmore, PA

October 2022 – Present

- Designing project for the projection of sewing patterns onto fabric, tracing shifts, through camera feed, in the fabric and making adjustments to project the pattern

Personal Website Design (<https://michelle-zhuang1.github.io/>)

May 2021 – Present

- Self-taught HTML, CSS, and JavaScript to design and implement a blog of my projects and passions

Computer Vision, *Swarthmore College*, Swarthmore, PA

January 2022 – May 2022

- Implemented live face swap program using the Laplacian blend method and OpenCV
- Implemented machine learning classification on MNIST dataset using TensorFlow

Computation Sewing Project, Engineering Department at *Swarthmore College*, Swarthmore, PA

June 2021 – August 2021

- Designed and implemented pattern making program to incorporate with Autodesk Fusion 360, turning 3D models of clothing into 2D patterns which are then laser cut into fabric

Data Analytics, *AESOP Academy*, remote

February 2021 – March 2021

- Successfully completed intensive professional learning series focused on end-to-end data management methodologies
- Built custom queries via MySQL, built Tableau data workflows from blending sources, established QA methods to validate reporting results, and created an interactive dashboard for mock client leadership

LEADERSHIP EXPERIENCE

Club President, *Women in Computer Science (W+iCS)*, Swarthmore, PA

January 2021 – Present

- Organized networking events and research panels with professors to connect students to resources and opportunities
- Maintained club website (<https://www.cs.swarthmore.edu/wics/>)

Event Manager, *Swaudio*, Swarthmore College, Swarthmore, PA

August 2022 – Present

Coordinated student staff to provide audio equipment and setup for various on shows and events on campus

WORK EXPERIENCE

Resident Assistant, *Swarthmore College*, Swarthmore, PA

May 2021 – Present

- Managed administrative duties, such as budgeting, maintenance requests, and incident reports
- Fostered the development of relationships among ethnically diverse undergraduate students

Software Engineer Intern, *Oracle OCI*, Remote

May 2022 – August 2022

- Implemented data pipelining program that used Kafka APIs in Docker containers to ingest several thousand findings from OCI Security Central's database to OpenSearch cluster for more accessible data visualization to customers

Costume Shop Assistant, *Theatre Department*, Swarthmore, PA

September 2019 – May 2022

- Measured, sewed, and altered 20+ costumes that showcased in campus Theatre productions

Student Academic Mentor, *Swarthmore College*, Swarthmore, PA

May 2020 – May 2021

- Responsible for time management, organization, and study skills of 93 students

Tutor, *Dare2Soar*, Chester, PA

September 2019 – May 2020

- Strengthened fundamental arithmetic skills in 20-30 elementary school students of the Boys and Girls Club of Chester

ADDITIONAL INFORMATION

Awards: Helen North Scholarship, Frances Velay Women's Science Research Fellowship, Grace Hopper Celebration Scholar

Languages: Native English, Conversational Mandarin Chinese, Intermediate French

Activities: Swarthmore Chorus, Garnet Singers, Library Reserves Assistant, Mixed Company Acapella Group