

Michelle Zhuang

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Education

Swarthmore College, Swarthmore, PA

GPA: 3.7, May 2023

Anticipated BS Engineering and BA Computer Science Double Major

- **Relevant Engineering and Computer Science Courses:** Data Structures and Algorithms, Numerical Methods for Engineering Applications, Electric Circuit Analysis, Computer Architecture, Linear Physical Systems Analysis

Technical Skills: Microsoft Office Suite, Google Suite, Matlab, Python (Intermediate), C++ (Intermediate), SQL (Intermediate), Tableau (Intermediate), Stata (Intermediate), HTML (Intermediate), CSS (Intermediate), MIPS assembly language (Intermediate), Verilog (Intermediate), Autodesk Fusion 360, (Basic), Java (Basic), JavaScript (Basic)

Programming and Data Analytics Experience

Engineering Department, *Swarthmore College*, Swarthmore, PA

June 2021 – Present

- **Computational Sewing for Sustainability Project:** designing pattern making program to incorporate with Autodesk Fusion 360, turning 3D models of clothing into 2D patterns
 - **Goal:** create accessible ways for people to upcycle and repurpose unwanted clothes

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

May 2021 – Present

Data Structures and Algorithms, *Swarthmore College*, Swarthmore, PA

September 2020 – December 2020

- **Query Tool Program:** using a linear dictionary to implement a hashtable, the user is able to search through a given database of tweets by username or date
 - Uses a priority queue to return the tweets in order of popularity
- **Maze Program:** using stack and queue data structures, the program solves a maze by either breadth-first or depth-first search and throws a runtime error if there is no solution to the maze

Data Analytics, *AESOP Academy*, remote

February 2021 – March 2021

- Built custom queries via MySQL, built Tableau data workflows blending sources using UNIONs and JOINs, establishing QA methods to validate reporting results, and creating a final interactive dashboard for mock client leadership

Work Experience

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

May 2020 – Present

- Responsible for time management, organization, and study skills of 93 students
- Coordinates weekly email to my assigned students with academic deadlines and events on campus

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

September 2019 – May 2020

- Measured, sewed, and altered 20+ costumes for campus Theatre productions

Tutor, *Dare2Soar*, Chester, PA

September 2019 – May 2020

- Worked through Swarthmore College branch with Boys and Girls Club of Chester to aid elementary school 20-30 students in English and Math once a week
- Assisted students in reviewing and strengthening fundamental arithmetic skills

Leadership Experience

DECA Club, *Auburn High School*, Auburn, AL

August 2017 – May 2019

- Led start-up business plan module that placed 3rd at the Alabama State Conference
- Worked with the East Alabama Food Bank to organize annual food drive at school, leading team of 14 volunteers and donating over 1500 cans

Coordinator and Volunteer, *East Alabama Medical Center*, Auburn, AL

August 2017 – May 2019

- Initiated and led “Project Linus,” a donation drive to make and provide 300+ blankets for local children

Additional Information

Awards: The Helen North Scholarship, Frances Velay Women’s Science Research Fellowship

Languages: Native English, Conversational Mandarin Chinese, Intermediate French

Activities: Swarthmore Chorus, Garnet Singers, Library Reserves Assistant (Spring 2020)

Interests: Upcycling thrifted clothes, Chinese Folk Dance, Singing, Baking, Romantic Comedies