Zachary Long

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Education

University of Minnesota Twin Cities

Bachelor of Science, Computer Science GPA 3.9   Anticipated Graduation May 2027

Program Design and Development (C++, Software Engineering) *(In Progress)*

User Experience Design, Prototyping, and Evaluation *(In Progress)*

Technical Skills

Software: Git, GitHub, AWS, Docker, Visual Studio Code

Languages: C, C++, Python, Java, OCAML, Lua

Projects

Engineering World Health - Alzheimer's Detection Device

Programming Team Member

- Programmed data-processing modules in Python to support a low-cost retina imaging device.
- Collaborated with hardware and biomedical engineers to integrate imaging outputs with analysis pipelines.

Software Engineering Project - Video Editor *(In Progress)*

Solo Developer

- Designing and implementing a C++ video editing application using object-oriented design patterns.
- Applying software engineering principles to manage feature scalability and maintainability.

Python Twitter Bot - Fully Autonomous

Solo Developer

- Developed and deployed a Python bot leveraging the Wordnik API to generate captions and image modifications.
- Automated posting workflows by scheduling execution through PythonAnywhere.

Discord Automation Bot

Solo Developer

- Built a Python Discord bot with scheduled events, command parsing, persistent score tracking, and automated role management.
- Applied concepts in API interaction, event-driven programming, and data persistence.

Leadership

Association for Computing Machinery (ACM) - Member, coding workshops

Respectacle - Volunteer, assisted in processing donated eyewear for distribution

Experience

iD Tech   Saint Paul, MN

Instructor   Jun 2025–Aug 2025

- Delivered programming and creative technology courses (Python, Java, game design tools) to classes of ~8 students.
- Mentored students in debugging, project development, and problem-solving to strengthen coding skills.

Trafera   Arden Hills, MN

Production Associate   Jun 2023–Sep 2024

- Executed device setup and configuration (asset tagging, enrollment, MAC scanning, protective installs) to client specifications.