

Max Mossberg

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Education

University of Michigan

2023

BSE in Computer Science

Ann Arbor, MI

- **Relevant Coursework:** Computer Security, Web Systems, Databases, User Interface, Game Development

Experience

Editorkh LLC | Python

May – Aug 2020

Software Engineering Intern

Remote

- Contributed to automatic video editing tool [Jumpcutter](#) for Twitch live streamers
- Developed python code to download live-stream data using the Twitch API, identify timestamps based on spikes in chat engagement, and apply video cuts with FFmpeg

Projects

Sketris | WebRTC, HTML/CSS, Javascript

2023

- Modern tetris training web app built from scratch featuring board position imports/exports via string format or automated screenshot parsing and real-time collaboration among many users
- Designed and implemented UI with focus on improved UX over existing tools
- Conducted user research to identify gaps in current ecosystem and provided bug-fixing support
- 150+ users

EECS 481 - Software Engineering | C, Java, Python

2022

- Class focused on modern software engineering coding and testing practices.
- Created test suites for large software suites libpng and JFreeChart and analyzed the branch and line coverage of their source code with utilities gcov and cobertura
- Assessed robustness of test suites for the python library fuzzywuzzy through mutation testing of the program's abstract syntax tree (AST)

Snowbound | Unity, C#

2021

- Worked in team of 4 students to prototype ideas, implement play-tester feedback, and deliver a complete game
- Owned level design, character physics, and music composition
- Communicated with external artists for additional art and sound design support
- Voted overall best game of joint Umich + EMU Game showcase

MRover Project Team - Computer Vision Subteam | C

2020

- Implemented visual marker (AprilTag) detection to orient rover when autonomously traversing gates

Handy Robotics | Python, OpenCV, Arduino

2018

- Built a robotic hand that interactively plays Rock, Paper, Scissors
- 3D printed and assembled robotic hand with servo-actuated fingers controlled by Arduino Uno
- Wrote python driver program that analyzes hand position using computer vision and communicates with Arduino.

Technical Skills

Languages: C++/C, C#, Python, HTML/CSS, Javascript, Golang, \LaTeX , SQL, R, Matlab, G-code

Technologies: Bash, Git, Unity, OpenCV, MongoDB, React, Svelte, WebRTC, FFmpeg

OS: Windows, Linux

Leadership

- Captained 2018 State Champion FTC Robotics Team [HAX robotics](#). Directed design decisions during the season and coordinated competition preparation efforts including robot testing checklists, contingency plans, and game strategy.
- Ran tournaments and education events as high school Chess Club leader

Personal

- Classically trained pianist who also enjoys music production (see Snowbound) and programming music [visualizations](#).
- 3D Printing Hobbyist, enjoy modeling my own solutions/tools in Fusion360 and sharing my CAD designs online.