STEPHEN MA

ma000094@umn.edu | github.com/stephen3m | www.linkedin.com/in/stephen3-ma

EDUCATION

University of Minnesota, Twin Cities **Minneapolis, MN**
College of Science and Engineering *September 2021 - Present*
Bachelor of Science in Computer Science *GPA: 3.9, Dean's List for 4 semesters*

Coursework

Program Design and Development, Algorithms & Data Structures, Advanced Programming Principles, Machine Architecture, Discrete Mathematics, Statistics, Introduction to Computing and Programming Concepts

Skills

Programming Languages: Python, Java, C, C++, OCaml, HTML, JavaScript, TypeScript, SCSS
Frameworks: TensorFlow, TensorFlow Lite, Angular, PyTorchT
Tools: Colaboratory, GDB, GCC, Git, Intellij, VS Code, Eclipse, Linux, Raspberry Pi, Docker, Doxygen

PROJECTS

Gopher Bin | GITHUB: https://github.com/SASE-Labs-2022/Gopher-Bin
Society of Asian Scientists and Engineers *September 2021 - May 2022*

- Assembled a machine-learned waste categorizer that sorts objects based on their biodegradability
- Worked in subteam to build biodegradability object database and used it to train a convolutional neural network in TensorFlow to analyze and classify objects
- Linked Python script to run the TensorFlow object detection model on Raspberry Pi camera

Drone Simulation
Program Design and Development *January 2023 - May 2023*

- Implemented different design patterns and software development processes in the creation of an interactive simulation that allows the user to schedule drone trips to pick and drop off robots
- Used C++ to integrate shortest path algorithms, data collection tracking, and drone battery functionalities into the system
- Acted as the team lead organizer and manager

Clothing Heating Compartment
Society of Asian Scientists and Engineers *September 2022 - May 2023*

- Wrote a program that reads Raspberry Pi analog input from temperature sensors and uses the information to control the heating pad power supply in heating compartment
- Experimented with different wiring configuration and GPIO pins on Raspberry Pi to find optimal setup

Arcade Fighting Game | GITHUB: https://github.com/stephen3m/Fighting_Game
Personal Project *July 2022*

- Created an animated, arcade fighting game by using JavaScript and event listeners for character sprites and basic fighting mechanics, and HTML Canvas for the graphics.

WORK EXPERIENCE

Violin Instructor **Woodbury, MN**
Self-Employed *September 2017 – Present*

- Taught private and group violin lessons to over 20 students of all ages and levels
- Prepared students for theory exams, performance exams, competitions, and youth orchestra programs