# Tommy Huang

1B CS Student at the University of Waterloo

github.com/tommyhuang-dev

tommyhuang.net

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Skills and Technologies (Listed with most proficient first)

Languages: Python, Java, Scheme, C++, HTML, CSS

Technologies: Git, Arduino, Autodesk Inventor, Valve Hammer Editor, Shotcut

Projects

Shape Defense (Python, Pygame)   August 2018 – present

- Utilized Pygame, a module for Python, to create a video game where players can build, upgrade, and construct mazes to defend themselves from enemies
- Learned about pathfinding algorithms, graphical user interfaces, and reading/storing information about maps and entities

SprayZ (C#, Unity)   September 2019

- Helped create an app that allows the user to digitally spray-paint on real world surfaces through a smartphone camera by using Augmented Reality (AR)
- It used Unity 3D's AR to detect walls and floors

Line following car (C++, Arduino)   June 2018

- Designed a small car that used Arduino and IR sensors to follow a black line or tape
- Could navigate turns, both gradual and sudden (i.e. 90-degree intersection), as well as stop, based on the path created

Experience

Waterloo Rocketry Team (Member of Electrical Team)   September 2019 – present

- Engineered a prototype that utilizes magnets and a hall effect sensor to detect if a tank is full
- Used CAN protocol to communicate between different microcontrollers (WIP)

Highschool Robotics Team (Head of Design)   September 2015 – June 2019

- 3-D Modelled and assembled intricate components of a robot using Autodesk Inventor
- Organized and subdivided tasks to the rest of the team
- Communicated with other teams to ensure models stayed up-to-date and accurate

Education

University of Waterloo Candidate for Bachelor of Computer Science (expected 2024)

   1A term average: 92.4% (GPA 3.98)