Caden Chan

gpot22.github.io • linkedin.com/in/cadenchan22 • chancaden.cc@gmail.com • (647) 859-8533

Highlights of Qualifications

- Proficient in programming with Python, Javascript, HTML, CSS with working knowledge of C and C++
- Hands-on experience in PCB and mechanical design using KiCad, Autodesk Inventor and Fusion360
- Knowledgeable of programming frameworks Django, Flutter, Flask
- Strong collaboration skills, with the ability to express thoughts clearly, actively listen to others and collectively discover solutions
- Committed to continuously acquiring new knowledge and developing myself both professionally and personally
- Empathetic, resilient, self-aware, and motivated individual

Education

McMaster University   Sept. 2023 - June 2028
Bachelor of Engineering in Biomedical Engineering   *Hamilton, ON*

Projects

AutoChessboard | *Personal Project*   May. 2024 - Sept. 2024
Relevant technologies: ESP32, Autodesk Inventor, KiCad, Python, Arduino
- Worked closely in a team of 2 to design an automated system of ESP32-controlled servo cars that magnetically move chess pieces from the underside of the board.
- Developed and tested a dynamic multi-agent pathfinding algorithm to inform the movement of the cars, such that pieces can shift to the correct positions without unwanted collisions between pieces and cars
- Designed and tested several two layer PCBs using KiCad to allow interfacing between the ESP32, a matrix of hall effect sensors, rows of PNP transistors and several other electrical components, used to detect the position of pieces on the chessboard.

Divide to Conquer | *Goedware Game Jam #11*   Apr. 2024 - May. 2024
Relevant technologies: Godot, GDScript
- Co-developed a game in a team of 3 for the 10 day long Goedware Game Jam.
- Self-directed the learning of game design principles, character movement mechanisms and the Godot game engine, which resulted in achieving 1st place in the gameplay category

Youtube Academy | *Google Developer Student Clubs Hackathon at McMaster University*   Feb. 2024
Relevant technologies: Flask, Flutter, Python, Youtube API, GeminiAI
- Led development of a web platform for curating informational Youtube content
- Advocated for accessibility in education in a team of 4, showcasing our platform at the GDSC McMasterU Solution Challenge Hackathon

Sumobot | *Sumobot Competition at McMaster University*   Oct. 2023 - Jan. 2024
Relevant technologies: Arduino, Autodesk Inventor, 3D Printing
- Prototyped and designed an autonomous sumo robot in a team of 4 using Arduino and electronic sensors, to compete at McMaster's Beginner Sumobot Competition.

Experience

Assistant Teacher   Sept. 2019 - June 2023
Spirit of Math Schools   *Markham, ON*
- Coordinated classes of 20-30 students, from grades 3 to 11, to facilitate a rigorous curriculum.
- Engaged with teachers to develop strategies that encourage a friendly learning environment and stimulate a desire for learning.
- Independently led homework tutorials to resolve students' outstanding questions, with a focus on individualizing learning through one-on-one support.