

Shi Qi

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Skills

Programming	Python, C++, C#, Java, JavaScript
Deep Learning	PyTorch, sklearn
Web	HTML, CSS, React, Django, SQLite, Plotly, Dash
Embedded System	STM32, Arduino, Raspberry Pi, VHDL
Languages	English, French, Mandarin

Experience

Data2Discovery

Remote - Bloomington, US

SOFTWARE DEVELOPPER

Feb. 2023 - May. 2023

- Maintained and developed a data visualization dashboard using the Dash library.
- Researched on the Transformer model, and lead workshops discussing its internal workings and limitations.

Projects

Reinforcement Learning in 2D Shooter

PYTHON, PYGAME, PYTORCH

2022

- Created a top-down 2D arena shooter game in PyGame.
- Implemented Q learning in PyTorch to train an AI that shoot targets in the game.

Star Formation Simulation: Astro Award Winner

McGill Physics - Hackathon

PYTHON, PYGAME

2022

- Created a simulation of planetary motion in PyGame, demonstrating gravitational pulls between stars and the formation of larger bodies.
- Simulated the trajectories using Euler's method, based on physics calculated using Newton's Laws.

Minecraft teleport plugin

JAVA, SPIGOT, MAVEN

2021

- Developed a Spigot plugin running in Minecraft 1.16, enabling teleport-able waypoints and teleportation requests between players.
- Implemented an in-game GUI for the command menu, and added teleport animations with sound effects, potion effects, particle effects and animated bossbar.

SVI Scheduler

MariHacks 2.0 - Hackathon

PYTHON

2021

- Developed a Google Sheet plugin that automatically balances work load across different workers based on their availabilities, using greedy algorithm and priority queue.

Education

University of Waterloo

Waterloo, ON, Canada

COMPUTER ENGINEERING, UNDERGRADUATE

2022 - present

President's Scholarship, 92.08 1A average, 3/3 GPA

Honors & Awards

HACHATHONS

2021 **Winner of the Astro Award**, McGill Physics Hachathon

Canada

2021 **Winner of the beginner HTML prize**, BrebeufHX 4.0

Quebec, Canada

MATHEMATICS

2022 **Scored 80-100**, Euclid Contest

Canada

2021 **Top 25%**, Euclid Contest

Canada

2019 **Top 25%**, Fermat Contest

Canada

2018 **Top 25%**, Cayley Contest

Canada

2018 **11th Place**, Optimath

Quebec, Canada