

Shi Qi

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Skills

Programming	Python, C++, C#, Java, JavaScript, Rust
Deep Learning	PyTorch, sklearn, HuggingFace
Web	HTML, CSS, React, Django, SQL, Plotly, Dash
Embedded System	STM32, Arduino, Raspberry Pi, VHDL
Tools	Git, Github, VS Code, Vim, Jupyter Notebook, Conda, Docker, Markdown, Latex

Work Experience

Data2Discovery

Remote - Bloomington, US

SOFTWARE DEVELOPPER

Feb. 2023 - May. 2023

- Maintained and developed a data visualization dashboard using the Dash library.
- Refactored fatal design flaws, leveraged proper usage of the Dash library, and eliminated linearly increasing server call queue time.
- Researched on the Transformer model, and hosted workshops discussing its internal workings and limitations.
- Lead projects among three data science graduate teams, contributed to decision making and organized regular internal communications.

Projects

Reinforcement Learning in 2D Shooter 🔗

PYTHON, PYGAME, PYTORCH

2022

- Created a 2D top-down arena shooter game in PyGame with custom sprites and collision logics.
- Worked as a team to implemented Q learning with PyTorch and trained an AI that shoots moving 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.
- Calculated the trajectories using Euler's method, based on physics simulated using Newton's Laws.
- Winner of Astro Award over 100+ participants in the McGill Physics Hackathon.

Minecraft Teleport Plugin 🔗

JAVA, SPIGOT, MAVEN

2021

- Developed a Spigot plugin for Minecraft 1.16, enabling teleport-able waypoints and ticket based teleportation requests between players, which improves the overall player experience without breaking the game balance.
- Implemented an in-game GUI for the command menu, and added custom teleport animations with sound effects, potion effects, particle effects and animated bossbar.
- Deployed to a self hosted server peaking 30 online users with no sign of performance drawback.

SVI Scheduler 🔗

MariHacks 2.0 - Hackathon

PYTHON, TYPESCRIPT

2021

- Developed a Google Sheet plugin that automatically balances work load across different workers based on their availabilities, using greedy algorithm and priority queue.
- Later deployed at an organization providing translation service for allophone patients, and is proven to be highly functional through worker feedbacks.

Education

University of Waterloo

Waterloo, ON, Canada

COMPUTER ENGINEERING, UNDERGRADUATE

2022 - present

President's Scholarship - \$2000

Honors & Awards

2022	Winner of the Astro Award , McGill Physics Hackathon	Canada
2021	Winner of the beginner HTML prize , BrebeufHX 4.0 Hackathon	Quebec, Canada
2022	Unofficially ranked scoring 80+ , Euclid Contest	Canada
2021	Top 25% , Euclid Contest	Canada