

Tridib Banik

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Highlights of Qualifications

- Currently enrolled in the Software Engineering Co-op undergrad program at McMaster University, eligible for a 4 to 12-month internship starting in Spring 2025.
- Achieved the Google IT Support Professional Certificate – an 8-month IT support program covering troubleshooting, networking, operating systems, system administration, and cybersecurity.
- Career interests: Machine Learning, Reinforcement Learning, cybersecurity, data analysis, and entrepreneurship.

Education

Bachelor of Engineering, Software Engineering Co-op
McMaster University, Hamilton, ON

Sept. 2023 – April 2027

- **Relevant Courses:** OOP in Java, Integrated Cornerstone Design Projects in Engineering, Data Structures and Algorithms, Development Basics in C, Linux and GitHub, Computer Architecture.

Skills

Programming & Software: Linux, Bash, Python, Java, C, Verilog HDL, HTML, PostgreSQL, Maven, MATLAB, Simulink, Autodesk Inventor, GitHub, GitLab, Intel Quartus Prime, and Ansys Granta.

Business: Effective communication, project management, problem-solving, and critical thinking.

Projects

TrafficLightRL | Python, OpenAI Gymnasium, Stable-Baselines3 in PyTorch Jan. 2025 – Mar. 2025

- Collaborating with a team of 5 to develop a dynamic traffic light optimization system using **reinforcement learning** to reduce urban congestion and improve travel efficiency at university campuses.
- Focusing on optimizing traffic flow at the **Sarnia Road and Philip Aziz Avenue** intersection near **Western University** based on real-time simulation environments, leveraging RL techniques to reduce congestion.

BlackJack Game | C, Bash, YAML, GitHub

Nov. 2024 – Dec. 2024

- Contributed to a team of four to develop a GUI-based Blackjack game.
- Defined win/loss conditions, created **Bash scripts** for testing, achieved **100% test coverage**, and automated artifact uploads via build scripts.

Tic-Tac-Toe Game | Java, Maven, GitHub

Nov. 2024 – Dec. 2024

- Designed a simple interactive text-based Tic-tac-toe game using **OOP principles**.
- Featured both a 3*3 and an extended board, and multiple game modes including a smart computer player.

Revenge of the Recycling System | Python, Quanser Interactive Labs

Jan. 2024 – Feb. 2024

- Built a system with a custom sorting and recycling station using a **Python-written computer program**.
- Enabled testing of sorting and dispensing procedures on a virtual environment powered by Quanser Labs.

Work Experience

Support Server

May 2024 – Aug. 2024

The Distillery Restaurants Corp., Toronto, ON

- Addressed customer inquiries and resolved issues professionally to maintain a welcoming atmosphere.

Awards and Certifications

- Google IT Support Professional Certificate, Google **June 2024**
- OHSA, AODA, WHMIS, Anti-bias, and Cultural Awareness, HWTC **May 2024**
- Lt. Governor's Community Volunteer Award, Lieutenant Governor of Ontario **June 2023**
- Service Excellence and Emotional Intelligence, Ontario Tourism Education Board **Mar. 2023**
- Diploma in Yoga and Health Education, Bardhaman Yoga Centre, India **Sept. 2022**