Yash Bhavsar

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EDUCATION

McMaster University — Expected Graduation, May 2025
B.Eng in Electrical Engineering and Co-op — *Hamilton, ON*
McMaster Honours Award($1000)
Relevant Courses: Object Oriented Design(Python), Microprocessor Systems(C, Python), Machine Learning(Python)

EXPERIENCE

AMD | Software Engineer Intern — May 2023 − Apr 2024
- Led LINT-based **code review across 10+ long-term projects**, addressing 100+ critical errors across cross-functional teams while ensuring clear and maintainable code
- Developed and deployed automated tests using **C Shell** and **Python**, streamlining code design and testing, resulting in **20+ hours saved** per week
- Implemented and maintained a dashboard utilizing **PHP**, **JavaScript**, and **Perl**, to present real-time test results fetched from a **SQL** database, reducing the weekly workload by removing the need for manual updates

GBTEL | Technical Support Specialist — July − Sept 2022
- Identified and managed **50+** client networking issues involving infrastructure and cable faultiness
- Initialized wireless/fiber connections on administrative side by accessing IP addresses and researching local towers

PROJECTS

Lunar Lander Reinforcement Learning Hackathon (1st Place)
- Developed **Deep Q-Networks (DQN)** and **Proximal Policy Optimization (PPO)** agents using **PyTorch**, achieving a winning average test reward of **285.30**
- Optimized performance with **hyperparameter tuning**, experience replay, and trust region updates, improving performance by **29.8%**

Intelligent Email Sorting Chrome Extension
- Achieved 90% email classification accuracy with **spaCy** and **NLTK** models for sorting (work, personal, urgent, promotional)
- Built **Node.js** backend with real-time email retrieval via **Gmail, Outlook, and Yahoo APIs**
- Reduced **inbox management time by 30%** through extensive testing and **GDPR-compliant** optimizations

WealthHack
- Implemented a dynamic chatbot feature powered by **OpenAI API** with context to user data, providing personalized financial advice and enhancing user engagement with real-time, tailored recommendations
- Engineered a back-end server with **Flask** and **SQLite**, implementing CRUD operations for managing expense data

Personal Project Manager
- Designed a **React** based front-end that excels with HTTP requests, DOM manipulation, and routing to deliver a responsive and engaging user experience for managing and keeping track of projects
- Engineered RESTful API endpoints, maintaining data integrity through a structured **Mongoose** schema, comprehensive error handling and middle-ware
- Built a robust back-end, managing CRUD manipulated **NoSQL** data using **Node**, **Express**, and **MongoDB**

Embedded LiDAR Mapper
- Engineered an embedded **C** program for a TI micro-controller, using I2C communication, sensor initialization, precise distance measurements, and motor control to parse raw Li-DAR data
- Created a **Python** script for organizing and visualizing data from micro-controller through UART communication and matplotlib, including data storage, organization options, and 3D scatter plot visualization

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript, Java, Perl, PHP, HTML5, CSS3
Frameworks: ReactJS, ExpressJS, NodeJS, Flask, OpenAI API, Material UI, numpy, Tkinter
Developer Tools: Linux, GitHub, MongoDB, Docker, Postman, Perforce, Jira, Confluence, SQL, XML, JSON
Concepts: Data Structures and Algorithms, Unit Testing, Agile Development, CI/CD