

Yash Bhavsar

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EXPERIENCE

Software Engineer

February 2025 – Present

Finaptive

- Engineered a production-grade financial platform using **Python (Flask)** and **PostgreSQL**, delivering a scalable full-stack architecture that drove **\$95,000+** in first-year revenue
- Designed a high-throughput **asynchronous pipeline** using Celery and Redis, optimizing real-time data ingestion for performance and achieving an **87% increase** in system efficiency
- Implemented secure multi-protocol authentication (OAuth2.0, SFTP) and **AES256 encryption** to achieve **SOC1/GDPR compliance**, adhering to rigorous industry security standards
- Modernized infrastructure by engineering a **CI/CD pipeline** via **GitHub Actions** and Azure Container Registry, automating containerized builds and reducing manual deployment overhead
- Current Initiative:* Utilizing Azure Instances and Deployment Slots to implement high-availability **blue-green deployment** and scaling strategies

Design Automation Engineer Intern

May 2023 – April 2024

AMD

- Streamlined silicon design workflows by developing **automated test suites** using **Python and C Shell**, resulting in **20+ hours saved** per week for cross-functional engineering teams
- Led LINT-based **code review and static analysis** for 10+ long-term hardware design projects, identifying 100+ critical errors to ensure clear, maintainable, and high-quality code
- Administered data sources within **Perforce** to maintain CI/CD and coordinate version control across distributed design teams
- Maintained a real-time **diagnostic dashboard** using PHP and JavaScript to visualize test results from MySQL, removing manual update requirements and improving workload transparency

PROJECTS

Lunar Landing Reinforcement Learning Hackathon (1st Place) | *Python, PyTorch*

- Developed Deep Q-Networks (DQN) and PPO agents using **PyTorch**, applying a data-minded approach to achieve a winning test reward of 285.3, placing **1st of 50+ teams** and outperforming competitors from University of Waterloo and UofT
- Optimized model performance through **hyperparameter tuning** and trust region updates, improving agent efficiency by **29.8%**

Intelligent Email Sorting (ML Application) | *Python, PyTorch, JavaScript, Git*

- Built a **machine learning** pipeline with spaCy and NLTK for **90%** classification accuracy, sorting real-time data from Gmail and Outlook APIs
- Performed extensive **API testing** and GDPR-compliant optimizations, reducing management time by 30%

Embedded LiDAR Mapping Interface) | *Python, C, Serial*

- Engineered an **embedded C** program for a TI micro-controller using **I2C and UART** communication for precise sensor initialization and raw data parsing
- Developed a **Python-based tool** to visualize 3D scatter plots from LiDAR data, enabling real-time **hardware/software communication**

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, PHP, C Shell/Bash, HTML/CSS, ReactJS, NodeJS

Systems: Linux (Ubuntu), PostgreSQL, MongoDB, MySQL, Redis, Git, GitHub, Docker

Cloud: Azure, AWS, Container Registry, Key Management, Object Storage(Blob), Redis, Event-Driven Workflows

Concepts: AES-256 Encryption, RBAC, Concurrency, Multithreading, Unit Testing, CI/CD (Github Actions)

EDUCATION

McMaster University

Hamilton, ON

Bachelor of Science in Electrical Engineering

June 2025

Coursework: Data Structures & Algorithms, Object-Oriented Programming, AI/ML Fundamentals, Computer Architecture, Advanced Internet Communications