

Vincent Mai

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EDUCATION

York University

Toronto, Canada

Bachelor of Engineering, Spec. Hons. Software Engineering

Sep 2020 – June 2025

- **Relevant Coursework:** Data Structures, Advanced Object-Oriented Programming, Embedded Programming, Operating Systems, Digital Logic, User Interfaces, Databases

EXPERIENCE

Junior Software Developer Intern

Sep 2022 – Dec 2022, May 2023 – Dec 2023

Iot Signum

Mississauga, ON

- Developed, debugged, and maintained a full-stack web application using Python, Django, HTML, CSS, and JavaScript. Optimized back-end processes, reducing execution time by 25%.
- Contributed to the development of unit integration and end-to-end (E2E) testing frameworks to ensure software reliability.
- Collaborated in Agile workflows, completing 10+ sprints and contributing to 15+ successful features/bug fixes delivered ahead of schedule. Implemented user feedback to optimize UI responsiveness by 20%.

Pharmacy IT Technician - General Technology and Systems

Jan 2024 – Apr 2024

Pharmasave RealCare Pharmacy

Vaughan, ON

- Installed and configured newly acquired computer hardware, pharmacy management software, and peripherals to support seamless operations, allowing for an increase of 30% in productivity.
- Led the design and deployment of a wired network infrastructure for 5+ workstations, enhancing system reliability and reducing downtime by 15%. Configured routers, switches, and access points to optimize performance and security.

Mathematics Tutor

Jun 2020 – Present

Iron Tutor

Scarborough, ON

- Provided personalized tutoring sessions to students in Grades 2–12, covering topics from basic arithmetic to advanced algebra, geometry, and calculus.
- Assessed individual student needs and tailored lesson plans to address knowledge gaps and reinforce strengths.
- Conducted group tutoring sessions up to 7 students simultaneously, fostering collaborative learning and ensuring personalized attention for each student, resulting in an average grade improvement of 15%.

PROJECTS

Grabbit - Secure Online Marketplace for Pre-Owned Goods | *Node.js, Express.js, Stripe, MongoDB, React.js*

- Implemented a 3-tier microservices using Node.js, Express, and MongoDB, enabling independent development and deployment of features across the platform.
- Led the integration of Stripe payment processing, enabling secure real-time transactions; reduced manual payment handling and increased payment success rate.

App Review Pre-Processing and Sentiment Analysis | *Python, Selenium, NLTK, NLP, Machine Learning*

- Developed a scalable sentiment analysis pipeline, processing over 10,000+ app reviews with Selenium to extract actionable insights and feature requests for developers.
- Utilized AI-driven text pre-processing using Python libraries such as NLTK and Pandas.
- Implemented sentiment analysis with VADER, Textblob, achieving an average of 90% accuracy in review polarity.

FPGA Pac-Man With Raspberry Pi Integration | *VHDL, MicroPython, DE-10 Lite FPGA, Raspberry Pi Pico 2W*

- Developed a custom Pac-Man game on the DE-10 Lite FPGA using VHDL, implementing real-time VGA output, maze rendering, and Pac-Man movement.
- Utilized a MicroPython-based ghost AI system on a Raspberry Pi Pico 2W communicating with the FPGA via GPIO pins.
- Integrated ghost AI strategies such as Manhattan Distance Greedy and Q-learning-based reinforcement learning to enable adaptive behaviour.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, PostgreSQL, MySQL, JavaScript, HTML, CSS, Verilog

Frameworks: React.js, Node.js, Express.js, Flask, JUnit, Django

Developer Tools: Git, VS Code, PyCharm, IntelliJ, Eclipse, Node-RED

Libraries: Pandas, NumPy, Matplotlib, JQuery, Bootstrap