Kavir Auluck

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EDUCATION

University of Waterloo — Waterloo, Ontario

Bachelor of Software Engineering

Scholarships: Scotiabank Software Engineering Entrance Scholarship ($20,000) | President's Scholarship of Distinction

Relevant Coursework: Programming Principles, Software Engineering Methods, Linear Algebra, Calculus

TECHNICAL SKILLS

Languages: Java, Python, C/C++, HTML/CSS, C#, JavaScript, SQL

Frameworks and Libraries: React, Next.js, React Native, NumPy, Matplotlib, Flask, Node, Spring, PyTorch

Tools and Platforms: Git, GitHub, Arduino, Figma, Linux, Windows, Maven, Supabase

WORK EXPERIENCE

Trexo Robotics (YC W19) — Jul. 2024 – Aug. 2024

Software Engineer Intern — *Mississauga, Ontario*

- Designed and implemented an **end-to-end encoder testing system** using **C++ (Arduino)** and **Python**, producing reproducible, auditable test data required for quality and compliance workflows.
- Built a **Python** data ingestion and analysis pipeline to process and persist **1,000+ data points** per test run, exporting results to **CSV** and generating automated regression plots using **NumPy** and **Matplotlib**.
- Implemented automated validation logic using statistical checks to replace manual pass/fail review, reducing human review time per test by **60–70%**.
- Developed configurable tooling with adjustable validation thresholds, streamlining repeated encoder testing and contributing to **$15K+** in avoided costs.

PROJECTS

Goose Trials | *Next.js, TypeScript, React, Supabase*

- Built and continue to develop Goose Trials, a university-focused cognitive mini-game platform with 7 games and per-game leaderboards using **Next.js**, **TypeScript**, and **Supabase**.
- Launched the platform and supported **1,000+ players (guests and registered)** in 24 hours, enabling real-time score submission and ranking.

CareBridge | *Python, TypeScript, React, Next.js*

- Built an AI-powered recovery assistant to help post-operative patients locate prescribed medications using **computer vision** and an interactive **map-based pharmacy search**.
- Developed a **Python-based prescription analysis pipeline** using a **multimodal API** to extract structured medication data from uploaded images and PDFs for use across the application.
- Implemented a **Next.js/React frontend** integrating the **Google Maps JavaScript** and **Places APIs** to display nearby pharmacies with real-time location, ratings, and hours, reducing the steps required to find available medication.

Auto-Alert – StarterHacks Winner | *Python, React, TypeScript*

- Built a **real-time vehicle security system** to detect suspicious activity and potential car theft using **computer vision** and automated alerts.
- Contributed to a **Python-based video analysis pipeline** using **OpenCV** and a trained detection model to identify theft-related behavior from video frames.
- Developed a **React Native frontend** that allowed users to manage vehicle details and receive real-time alerts via SMS.

Robotics Systems Lead | *Python, Control Systems, Embedded Systems*

- Led a team of **4** to design, build, and program a competitive **VEX robot**, coordinating software and mechanical development through iterative testing and refinement.
- Developed and refined **Python-based autonomous control logic**, integrating **sensors** and **control outputs** for reliable autonomous and driver-controlled operation.