Anurag Aggarwal

aaggar68@uwo.ca • (647) 649 - 4667 • LinkedIn • theanuragggarwal.com • GitHub

Education

University of Western Ontario *Sept. 2023 - Current*

BESc in Mechatronics Systems Engineering and Artificial intelligence systems Engineering - Cum. GPA: 3.9

- **Relevant Courses:** Algorithms & Data Structures, Database Management Systems, Applied Statistics & Data Analysis, Cyber physical Systems, Electrical Instrumentation, Software design for Sys Eng.

Institute of Machine Tool Technology, Mississauga, Ontario *Sept. 2022 - July 2023*

Diploma of CNC Operator and Programmer

- Programmed & operated FANUC CNC mills/lathes (tool offsets, probing, G-code) and produced SolidWorks - Mastercam toolpaths (feeds/speeds, simulation, fixturing) for precision machining.

Experience

Computer Vision & AI-Powered Automation Intern | Kissan Engineers (Casting) *Summer 2025*

- Piloted a faster inspection step that **flagged defects 20 - 25% earlier**, easing operator load canceling redundant checks and reducing downstream delays in flagged parts.
- Smoothed station setup **cutting setup time by 30%** and ran quick A/B trials, which improved **adoption rates across shifts** within the first week and **smoothed station setup** by fixing everyday friction (lighting, cable routing, fixtures)

CNC Machinist | A-line Precision Tool Ltd., Ontario *March 2023 - Aug. 2023*

- kept setups organized and inspections consistent, lowering **scrap rates by 15%** and keeping jobs on schedule.
- logged small process tweaks and tool notes that **cut changeover time by 10 - 12%**, giving teammates a clearer handoff and **raised issues early** (fixture slip, tool wear chatter) to **avoid last-minute rework**.
- Trained new hires on safety and checks; within weeks they were running parts with **30% less supervision**, which kept shifts calm and predictable.

Embedded Systems Developer (Independent) | Freelance Work *May 2021 - Aug. 2023*

- Standardized simple test checklists which **cut debugging time by 25%** across small client and personal projects.
- Integrated sensors/actuators and tightened basic safety (watchdogs, limits), **reducing bring-up failures by 30%** and keeping demos steady, leading to fewer re-tests and quicker signoffs.
- Tuned firmware timing and basic controllers for quieter motors and cleaner readings.

Projects

Phish Sense - AI Phishing Detection System *Sep. 2025 - Present*

- Flagged risky emails/pages in real time, helping users avoid scams; early pilots showed **>90% detection accuracy.**
- Built a smooth flow from model → alerts → feedback, which **cut review time by 40%** and sped up weekly improvements, enabling **weekly model updates** with visible gains.
- Packaged the system with simple deploys and checks, reducing downtime and keeping the tool **available 95% of the time** during demos with quick rollbacks when needed.

Stock Analyzer - AI Equity Analysis + RestAPI *Mar. 2024 – Apr. 2024*

- CLI, Dockerized tool that fuses financial ratios, macroeconomic signals, and scored sentiment to generate trade signals and a portfolio breakdown based on user inputs (portfolio amount, risk level, and selected tickers).
- Runs one-command backtests/live runs and exports results; in live use, the strategy delivered **$1.5k realized and $4k+ unrealized gains in 4 months.**

Autonomous Delivery Rover + BLDC Motor Controller (FOC) *Sep. 2024 – Mar. 2024*

- Built a hallway rover that **navigated with >85% route success** across trials, reducing stalls and collisions in testing.
- Developed a motor control setup that improved **low - speed stability by 25%**, leading to smoother starts/stops, less wobble near walls, steadier docking, and better repeatability.
- Organized short test/fix cycles that **cut iteration time by 35%**, keeping the project on track for demo deadlines.

Core Skills and Certifications

- **Languages:** Python, C/C++, Embedded C, JavaScript, SQL
- **Embedded/Robotics:** STM32/ARM, FreeRTOS, KiCad, PID, PLC, LIDAR, SLAM
- **AI/Systems:** PyTorch, TensorRT, TinyML, scikit-learn; Linux, InfluxDB, Git/CI
- **Tools:** Jetson, SolidWorks, logic analyzers, soldering/rework
- **Certifications**: CWSA SolidWorks, TensorFlow Dev, Google PML, AWS ML