Ethan Yang

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Education

University of Toronto Toronto, ON
Bachelor of Applied Science in Electrical & Computer Engineering + PEY Co-op *Sep. 2025 – Expected May 2030*

Technical Skills

Languages: C/C++, Python, Java, JavaScript, TypeScript, HTML/CSS, MATLAB
Frameworks: React, Node.js, Flask, ROS
Developer Tools: Git, Linux, VS Code, Visual Studio, PyCharm, Eclipse, Arduino
Libraries: NumPy, Matplotlib, OpenCV

Projects

QuantiFi (3rd Place, UTEFA QuantiFi Competition 2025) | *Python* Nov. 2025
- Designed and implemented a dual moving average crossover trading strategy in Python
- Backtested the strategy on market datasets and evaluated performance using returns and Sharpe ratio
- Optimized strategy parameters via grid search to improve return stability

Stop! Don't Go On (Finalist, GoOnHacks 2025) | *React, Python, Flask, NumPy, OpenCV, Arduino* Nov. 2025
- Built a computer vision application to detect prolonged inactivity and attention loss to support productivity
- Implemented real-time face tracking using OpenCV and triggered hardware-based alerts via Arduino
- Designed and served REST APIs using Flask to coordinate frontend and backend communication

binder. | *React, TypeScript, Node.js* Oct. 2025
- Built a swipe-style marketplace application for browsing secondhand listings with price recommendation features
- Implemented automated scraping of Kijiji listings and structured listing data for analysis
- Developed price analysis and negotiation guidance features based on historical listing data
- Designed responsive, interactive user interfaces using React and TypeScript

Stock Price Simulation & Risk Analysis | *C++, Python, Matplotlib* Oct. 2025
- Implemented a Monte Carlo simulation in C++ to model stock price dynamics using Geometric Brownian Motion
- Simulated large numbers of price paths and analyzed resulting distributions for statistical properties
- Visualized simulation outcomes and evaluated model behavior using Matplotlib

Experience

Software Developer Sep. 2025 – Present
Robotics for Space Exploration *Toronto, ON*
- Developed robotics software in Python and C++ for student robotics competitions
- Wrote unit tests for ROS-based robotics components on Linux using simulation tools
- Collaborated with cross-functional teams to deliver mission-driven robotics software
- Applied Git, debugging, and documentation best practices throughout development

Volleyball Coach Sep. 2021 – Present
Toronto Thunderbolts Volleyball Club *Markham, ON*
- Led structured training sessions for multiple youth teams, managing schedules and performance feedback
- Mentored athletes and coordinated with coaching staff to improve team outcomes