

# Amit Altman

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## PROFESSIONAL EXPERIENCE

**Electrical Engineering Student**, *The JNE Group of Companies* May 2024 – Aug 2024 | Hamilton, ON, Canada

- Designed & issued various electrical drawings, ranging from 2D designs to single-line diagrams
- Sized cables & protection equipment given loads provided by client within project
- Created cable & panel schedules for cable routing, including their appropriate cable trays
- Followed electrical codes respective to the location of the project's development, including the OESC, NEC, IEC, and IEEE
- Aided the Automation/Controls team in the approval of control system drawings

**IT Software Developer Co-Op**, *International Language Academy of Canada* May 2023 – Aug 2023 | Toronto, ON, Canada

- Developed information technology, forming various enhancements and creating automation flows for data engineering solutions.
- Eradicated existing manual and inefficient processes, saving countless hours spent on data management and tracking.
- Consistently delivered on sprint deadlines, utilizing Azure DevOps for appropriate documentation.
- Technical skills exercised include C#, JavaScript, HTML/CSS, and Microsoft's Power Platform including Power Apps, Power BI, Power Automate, and Dynamics 365.
- Additionally contributed to the web development of ad tracking using Facebook's API and Google AdSense.

## SKILLS

**Programming Languages/APIs** — Java, C, C#, C++, JavaScript (Vanilla JS, Node.js, and React), React Native & Expo, Python (Flask, NumPy, PyTorch, scikit-learn), HTML/CSS, SQL, VHDL, Assembly, Verilog HDL, SystemVerilog, **Engineering** — Microsoft Excel, Power Platform, Dynamics 365 CRM, Data Management, Azure DevOps, AutoCAD 2D & 3D, Navisworks, Soldering, Computer Building, Arduino C, Intel Quartus, Altium Designer, Arduino HAL firmware, ModelSim, Electrical Engineering & Design (Cable/Panel Schedules, Single-Line Drawings, Electrical Codes: OESC, CSA, NESC, IEC, IEEE), Control Systems Design

## EDUCATION

**Bachelor of Applied Science - BASc, Computer Engineering**, *Queen's University* Sep 2023 – present | Kingston, ON, Canada

- Current Computer Engineering student, pursuing a dual-degree program in Physics
- Past Electrical Team Member for Queen's Racing Formula SAE Team

**Computer Engineering & Physics**, *National University of Singapore* Jan 2025 – present | Singapore

- Current International Exchange Student for the Winter 2025 Academic Term

## PROJECTS

**Quantum Computing Algorithms**, *Queen's ENPH 344 Course Final Project* Dec 2024

Created two quantum computing algorithms using Xanadu's PennyLane API implementation for Python. One algorithm simulates a Gaussian model and solves for minimized alpha and phi values (alpha dictating magnitude and phase, phi dictating rotation). The other algorithm is an implementation of Grover's algorithm to diffuse a Hamiltonian and develop a state probability density function that favors a specified quantum state.

**AI Motion Tracking App**, *Queen's ELEC 292 Course Final Project* Apr 2024

Developed a machine learning classifier using scikit-learn to determine whether any data fed resembled that of a user walking or jumping given tracked data from phyphox. Successfully implemented bonus work of creating a user interface for the program using PyQt5, and implementing the phyphox API into the application for wireless data transmission to allow for live user motion tracking.

**Charging Shutdown Circuit**, *Queen's Racing Formula SAE Team* Jan 2024

Development of a circuit that shuts down the appropriate charging terminals when any faulty is detected. Circuit is designed using Altium Designer, and firmware is implemented using Arduino HAL (hardware abstraction layer).

**PricePerfect**, *Hack The North 2023 Hackathon Team Project* Sep 2023

Aggregates hundreds of eBay listings for any given query and gives you an estimate of the item's value and what it should be listed for. Estimations are based on the title submitted, or of an image taken of the object. The app uses Google's Vision AI API to scan and identify items, and a Python script scraps eBay's databases to retrieve price models from either the image's processed item or the entered search bar. The app runs on IOS and Android, developed using React Native and Expo.

**Movie Playback**, *First-Year Design Team Project* Jan 2023 – Apr 2023

An engineering solution to the client's problem of being independent in movie selection with their impairments. The solution uses a Raspberry Pi on Linux running on-launch via Python script a full-screen local web application using HTML/CSS to display movies, and an Arduino controller transmitting input signals wirelessly to control the application.

**Study Squid**, *QHacks 2023 Hackathon Team Project* Jan 2023

A full-stack web application that infinitely generates unique math and science problems to solve for students studying the field, using languages and APIs including Python, JavaScript, HTML/CSS, Flask, NumPy, and Wolfram API