

Amit Altman

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PROFESSIONAL EXPERIENCE

General Member

Queen's Racing Formula SAE Team

Leading research initiative in developing a charging solution for the final car's development, and leading development of breakdown circuits required to maintain charging. Following guidelines established by Formula SAE regulations, research concluded the usage of Level 2 EV charging, using 208V+ AC charging by installing a charging unit that converts AC power to DC and charges accumulator, and a J1772 standard port as the charging source to accommodate given charging standards during competition. Development of charging breakdown circuit in progress using Altium Designer and Arduino HAL (Hardware Abstraction Layer) firmware.

09/2023 – present
Kingston, Canada

IT Software Developer

International Language Academy of Canada 🌐

Worked heavily on information technology, forming various enhancements and creating automation flows for data engineering solutions, eradicating existing manual and inefficient processes, saving countless hours spent on data management and tracking. Includes working heavily with C#, JavaScript, HTML/CSS, and Microsoft's Power Platform including Power Apps, Power BI, Power Automate, and Dynamics 365, while utilizing Azure DevOps. Additionally contributed to the web development of ad tracking using Facebook's API and Google AdSense.

05/2023 – 08/2023

Tabulator Deputy Returning Officer

Elections Ontario 🌐

Ran the tabulator voting machine on-site to document votes anonymously within the Eglinton—Lawrence electoral district.

05/2022 – 06/2022
Toronto, Canada

Programming Instructor

Self-Employed

Taught elementary school students how to program in basic Java in a semi-private virtual setting. Discovered an opportunity in the market of after-school activities during the pandemic. Provided a solution for parents looking to expand and improve their children's skills and activities.

06/2020 – 05/2021
Toronto, Canada

Basketball Referee

North Toronto Basketball Association 🌐

Officiated at sporting games and competitions to maintain standards of play and to ensure that game rules were observed, and safety practices adhered to.

09/2019 – 02/2020
Toronto, Canada

SKILLS

Programming Languages/APIs

Java, C, C#, C++, JavaScript (Vanilla JS, Node.js, and React), React Native & Expo, Python (Flask, NumPy), HTML/CSS, Database Query (MySQL), Encryption (RSA), VHDL

Engineering

Microsoft Excel, Power Platform, and Dynamics 365, Data Management, Azure DevOps, CAD software (AutoCAD & Fusion 360), Soldering, Computer Building, Arduino C, Intel Quartus, Altium Designer, Arduino HAL firmware

EDUCATION

Bachelor of Applied Science - BASc, Engineering Physics

Queen's University

Current Engineering Physics undergraduate student, with specialty in Electrical & Computing Engineering

Activities include: Formula SAE team

09/2023 – present
Kingston, ON, Canada

Bachelor of Engineering - BE

University of Western Ontario

Transferred to Queen's University following first year in Engineering
GPA: 3.7

09/2022 – 06/2023
London, ON, Canada

PROJECTS

PricePerfect

09/2023

Hack The North 2023 Hackathon Team Project

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

01/2023 – 04/2023

First-Year Design Team Project

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

01/2023

QHacks 2023 Hackathon Team Project

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

Emulated Game Controller

10/2021 – 11/2021

Personal Project

An Arduino device attached to a breadboard connecting multiple inputs including buttons and joysticks emulating Xbox 360 controller inputs via Arduino C with XInput API.

Pac-Man

10/2020 – 11/2020

Personal Project

Re-creation of the original Pac-Man using Java from scratch using JFrame, with minimal artificial intelligence on ghosts.

COURSES

ELEC 274 - Computer Architecture

01/2024 – 04/2024

Queen's University

Applications include: Implementation of logical structures of computers, instruction set architecture & execution sequencing, I/O interfaces, processor datapath, control unit design, semiconductor memory technology & hierarchy design, and development in Assembly-language programming.

Grade: To be completed

ELEC 252 - Electronics I

01/2024 – 04/2024

Queen's University

Applications include: Integration of op-amps, diodes, BP & FET transistors, power supplies, amplifiers, and digital logic circuits.

Grade: To be completed

ELEC 271 - Digital Systems

09/2023 – 12/2023

Queen's University

Applications include: Integration of logic gates and logic components (decoders, multiplexers, counters, adders, latches, flip flops), and development using Intel Quartus and VHDL

Grade: A

ELEC 278 - Fundamentals Of Information Structures

09/2023 – 12/2023

Queen's University

Applications include: Theories of data structures (including stacks, arrays, queues, dependencies, Binary & AVL trees, heaps, hashing) and development using C

Grade: To be received

ELEC 221 - Electric Circuits

09/2023 – 12/2023

Queen's University

Applications include: Development of DC circuits, dependent sources, RLC circuits, and AC application

Grade: To be received

ES1036A - Programming Fundamentals for Engineers

University of Western Ontario

Applications include: Object-oriented Programming methods and development in Java

Grade: 92