# Kyle Levy

https://kylelevy.github.io/
https://linkedin.com/in/kylelevyofficial/

Email: kylerlevy@gmail.com
Mobile: +1(416)-561-0093

## Summary of Skills

- Python, C, Arduino/ESP32 (Microcontrollers), FPGA, Git, MATLAB, Simulink, Linux, Assembly and ROS.
- Solidworks, Fusion360, LTSpice, KiCAD, Oscilloscope, Soldering, and 3D Printing.

## Education

- **Queen's University** — Kingston, ON
  *Mechatronics and Robotics Engineering, BASc.; GPA: 3.650/4.30* — *Sept 2021 — May 2025*
  - **Description:** A new discipline of engineering at Queen's University that combines electrical, mechanical, and computer engineering with a focus on robotics and autonomous systems.
  - **Relevant Courses:** Mechatronics and Robotics Design, Control Systems, Signals and Systems, Sensors and Actuators, Industrial Automation, Robotics, Electronics, Computer Networks, Numerical Methods & Optimization, Embedded Systems & Microprocessors, Computer Architecture.
  - **Awards:** Queen's University Excellence Scholarship — 1st & 2nd Year - Dean's Scholar

## Experience

- **QMIND (Disruptive Technology Organization)** — Kingston, ON
  *Project Manager* — *June 2023 — Apr 2024*
  *Innovation Design Team Member* — *Sept 2022 — Apr 2023*
  - **Leadership**: Led a team of 4 members to build a custom chatbot alternative to be showcased at the CUCAI conference.
  - **Planning & Organization**: Developed multiple statements of work, a timeline for the project, contingency plans, and a method of execution to ensure project success.
  - **Communication and Teamwork**: Coordinated tasks with group members to work effectively and distribute the workload in a way that played to the strengths of each member.
  - **Technical Contributions**: Using Python, assisted with curating data, parsing data, model creation, and model training.
  - **Machine Learning**: Used SKLearn to tokenize the files, build, train, and implement Naive Bayes and Transformer models.
  - **Data Parsing**: Built programs in Python which parsed a dataset of over 250,000 code files that were used to train the model.

- **Computer & Electronics Toy Store** — Toronto, ON
  *On-Call Technician* — *2015 — 2023*
  - **Computer Repair**: Conducted various services such as hardware replacements, OS repair, remote support, BIOS repair, virus removal, network management, and data recovery.
  - **PC Builds**: Assembled and configured custom PC builds for over 100 clients, ensuring clean wire management, efficient cooling systems and an aesthetic look.
  - **Front End Development**: Created static pages using HTML, CSS, JS, PHP, WordPress, and React.

- **Physioactive Orthopaedic and Sports Medicine Clinic** — Thornhill, ON
  *Office Administrator* — *Summer 2019 and 2020*
  - **Duties**: Processed insurance details/payments, kept daily bookkeeping records, and ensured efficient scheduling of patients.

## Technical Projects

- **Search and Rescue Rover**: Worked in a pair to develop a semi-autonomous mobile robot which would be used to navigate an environment autonomously and then be manually piloted to manipulate objects remotely. I specialized in the mechanical design of manipulators, electrical systems, wireless communication systems, control systems, and navigation algorithms.
- **Autonomous CO2 Monitoring System**: Worked with a team to develop an autonomous mobile robot which detected the $CO_2$ levels in a room for air quality safety purposes. I specialized in using ROS to connect the Raspberry Pi with the Arduino and sensors and the navigation algorithm based on the LiDAR data.
- **Code Vulnerability Detection**: Worked with a team to develop a language model AI which could read PHP code and detect outdated algorithms that could cause security issues upon implementation. I specialized in data processing and parsed the SARD dataset using Python to pull the necessary information and restructure them into a Pandas dataframe. I also assisted in designing the model, which used transformers to detect code that follows the structure of the example 'bad' code.
- **Worksheet Generator**: Automated the process of making worksheets using a Python script and LaTeX to generate word problems with variable parameters and a solution sheet. I used this software when I worked as a teacher to generate worksheets and reduced the time it took to make worksheets from an hour to a minute.

## Extracurricular

- **Photography**: I like hiking and adventuring in search of cool places to take photos. I enjoy street photography, nature photography and landscapes and sometimes post to an Instagram account.
- **Travelling**: I am always looking for new experiences! So far, I have travelled to Canada, the United States, South Africa, Costa Rica, and Peru. In future, I hope to continue travelling and documenting my experiences.
- **Volunteering**: Over the years, I have enjoyed volunteering some of my time in various ways. When I was younger, my parents encouraged us to help out at soup kitchens near the holidays. As a camp counsellor, I volunteered to work with special needs children to help them have a fun summer at camp and overcome some personal limitations.
- **Home lab**: I love to sit at home and experiment with different technologies. I have recently spent lots of time developing my home lab for various things such as ambient LEDs around my TV, robotic arms to do some small tasks, little mobile robots for fun, and a Linux server running media, home automation, games, and much more!
- **Self Learning**: I have recently completed an Introduction to Machine Learning Fundamentals course by the University of Washington. I also have completed many online courses for programming at various levels, PCB design, ROS fundamentals, and artificial intelligence.