

# Kyle Levy

<https://kylelevy.github.io/>

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## Summary of Skills

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

## Education

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- **Queen's University** Kingston, ON  
*Mechatronics and Robotics Engineering, BSc.; GPA: 3.650/4.30* Sept 2021 — May 2025
  - **Awards:** Queen's University Excellence Scholarship — 1st & 2nd Year - Dean's Scholar

## Technical Projects

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- **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 CO2 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Vulnerability Detection:** Worked with a team to develop a language model AI which could read PHP code and detect outdated algorithms that could cause security issues upon implementation.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.

## Experience

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- **QMIND (Disruptive Technology Organization)** Kingston, ON  
*Project Manager* June 2023 — Apr 2024
  - **Leadership:** Lead 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.
  - **Formal Training:** Completed an Introduction to Machine Learning Fundamentals course by the University of Washington.
  - **Technical Contributions:** Using Python, assisted with curating data, parsing data, model creation, and model training.
- **QMIND (Disruptive Technology Organization)** Kingston, ON  
*Innovation Design Team Member* Sept 2022 — Apr 2023
  - **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.
  - **Debugging:** Fixed problems regarding data fitting, model issues, and supervised training using strategies such as modular functions, collaborative efforts, and reading documentation.
- **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.