Gabriel Ravacci

778-683-4643 | gabravacci@gmail.com | linkedin.com/in/gabriel-ravacci | github.com/gabravacci

Skills

Software: C, Java, HTML/CSS, CAD (Fusion 360)
Hardware: Arduino
Practical: Soldering, Oscilloscope Usage, MATLAB, LaTeX

Experience

Guitar Luthier Assistant March 2021 – August 2021
High Voltage Custom Shop *São Paulo, Brazil*

- Learned to repair and maintain electric and acoustic guitars, which includes handling various types of wood, steel strings, pickups and the inner circuitry
- Repaired the circuitry of guitar pedals and amplifiers
- Assisted in the sale of guitars, pedals and amplifiers
- Refurbished and organized store inventory and catalog

Projects

Best performing Robotic Claw | *Arduino* 2022

- Developed with a team a fully functioning cardboard claw with Arduino electronics capable of lifting as much as 1 pound and holding it safely
- Wrote the code for the claw's distance detection system enabling autonomous operation
- Created a robust and safe design within permitted competition materials
- Top performing design within first year section
- Performed the fastest in carrying 10 objects into a container
- Succeeded in lifting all objects
- Carried the most objects over a distance

Fully Custom Mechanical Keyboard 2021

- Assembled a fully functional, custom mechanical keyboard
- Implemented an unique layout which required rewiring the PCB
- Hand-soldered the mechanical switches onto the PCB
- Lubricated each switch individually by hand
- Performed custom modifications to the stabilizers to improve acoustics
- Configuration done with QMK Firmware

Rainwater Harvesting Model | *Excel* March 2022

- Developed a model to simulate water consumption and expenses for a two-person household
- Implemented features for maintenance, cost-benefit analysis, and user satisfaction
- Accurately modelled water flow from fluid mechanics to determine pump specifications
- Optimized user satisfaction by adjusting system variables, and presented design justifications

Collaborative Physics Notes May 2022 – Present

- Collaborated with two upper year engineering physics students in writing detailed physics notes on LaTeX
- Contributed to a 67 page document (current), featuring original examples and exercises
- Notes currently cover Mechanics, Electrostatics, Thermal Physics and introductory Quantum Physics at an undergraduate level

Education

University of British Columbia Vancouver, BC
Bachelor of Applied Science in Engineering Physics, 2nd year *Aug. 2021 – May 2022*