

JOSEPH PARK

Vancouver, BC

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EDUCATION

University of British Columbia

B.AS in Electrical Engineering

Sep. 2017 – May 2022

Vancouver, BC

TECHNICAL SKILLS

Languages: Python, C/C++, C#, Verilog, Bash/Zsh, LaTeX

Design Software: Altium/KiCAD, Solidworks, Matlab, LTSpice, Quartus/ModelSIM,

Technologies/Tools: Linux (Arch), Git, Oscilloscope, Soldering (0402, QFP), MCU(STM32, AVR)

EXPERIENCE

Algo Communication Products Ltd.

April. 2022 – Pres.

Hardware Electronics Engineer

Vancouver, BC

- Designed schematics and layouts for Dynamic IP endpoint products that utilized POE (Power over Ethernet) using Altium Designer
- Streamlined production through designing in-house test jigs for PCBs reducing overhead costs associated with shipping between board fabricator for board verification
- Designed proximity sensor for IP intercom by designing PCB, writing firmware in C, and streamlining manufacturing through BOM verification and quality control
- Headlined the testing of products to meet FCC, CE, and RoHS certification along with internal immunity requirements (ESD, drop-test, etc.)
- Designed PCB and wrote firmware for dual gang button peripheral device that communicated over self-made single wire protocol.
- Coordinated with operations in validating alternate components, managing design release pipeline, verifying first articles, and updating production build books.

Neurio Technology Inc.

Jan. 2021 – May 2021

Hardware Engineer Intern

Vancouver, BC

- Designed OR-ing circuit PCB that differentiates between mains AC or backup DC generator for variable relay toggling
- Mitigated unwanted coupled EMC noise on digital outputs from relay arc switching by utilizing Schmitt trigger circuit
- Finalized design of relay stress test jig by debugging source code and modelling (Solidworks) and 3D printing enclosure

Alpha Technologies Ltd.

Sep. 2020 – Dec. 2020

Compliance and Verification Intern

Vancouver, BC

- Performed HIPOT, capacitor discharge, and touch current tests on rectifier modules to comply with safety standard 60990 & 62368-1 set by CSA and IEC
- Designed test-jig to be used for single phase touch current test; reducing need for Simpson meter

PROJECTS

DC Motor PID Position Controller

Jul. 2020

- Designed position controller that rotated shaft by input in degrees which sends feedback through rotary encoder.
- Developed 3D printed base and shaft couple that links the encoder to the DC motor.

Four Bar Linkage Robot Arm

Feb. 2020

- Simulated model of robot arm as open loop transfer function with SimulationX to track trajectory and measure inertia values.
- Prototyped 3D model of 3-phase induction motor with metal inserts within ABS and then later water-jet cut for initial working model.

LEADERSHIP / EXTRACURRICULAR

UBC Solar

Sept. 2019 – Jan. 2022

Low Voltage Subteam Lead

Design Team

- * Lead a team by delegating tasks, coordinating meetings, and keeping track of progress via weekly design reviews.
- * Designed GPS,SD-Logging, Dashboard PCBs using Altium and tested assembly with devised rigorous test plan.
- * Collaborated with other sub-teams from mechanical and software to coordinate on a system level to evaluate best design for solar vehicle.