Natkamol Limapichat

Electrical Engineering
Vancouver, BC

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TECHNICAL SKILLS

Electrical FPGA • Microcontrollers • Oscilloscope • Motors • MEMs • 3D Printing
Programming C/C++ • Python • SystemVerilog • Assembly(x86 / ARM) • MATLAB • HTML / CSS • PHP/SQL
Software CircuitMaker • Quartus / ModelSim • MATLAB / Simulink • Visual Studio • AutoCAD • Inventor / SolidWorks

ACADEMIC

University Of British Columbia — September 2016 – May 2020

- Bachelor of Applied Science in Electrical Engineering;
- Part of the SnowBot student design team, Turing club, Zero-2-One machine learning group

WORK EXPERIENCE

WOOD, Vancouver, BC — September 2018 – May 2019

Electrical Engineering Co-op

- Assisted engineers with documents, drawings verification, and related task, such as markup and revision update
- Developed an automated script for updating drawing lists and generating material lists.
- Compiled and generated reports on various substation, transmission and distribution projects for business development
- Collaborated with designers on streetlighting projects for Florida Power & Light

TECHNICAL PROJECTS

Environmental Enclosure for a Single-Cell Inkjet Printer — September 2019 – May 2020

Thermo Electric Cooler-Heater (Peltier) / Arduino / SolidWorks / Mechanical Prototyping

- Researched and designed a high precision temperature PID controller used with a Peltier element
- Developed and evaluated a temperature model for the system with rigorous testing
- Compiled comprehensive reports and presentations along with conducting weekly meetings with client and supports
- Collaborated with a team of five people to ensure the project met the strict specifications and budget

Motor Design and Development — January 2018 – May 2018

SolidWorks / Mechanical Prototyping

- Designed and developed brushed permanent magnet DC motors for a two-axis laser control system that drew images
- Researched and developed prototype of various motor parts using 3D printing along with machining and implementing the completed designs
- Led the mechanical team and collaborated with the controls team to implement the system

SLS 3D Printer Control System modeling — November 2017 – December 2017

MATLAB / Simulink

- Developed models to compute the direct and inverse kinematics of the simulated physical system
- Modeled the electrical and mechanical dynamic of the motor system along with electronic component and physical structures
- Designed and optimized a PID controller to maximize the speed of the system while minimizing position errors

Magnetic Field Track Controlled Robot — April 2017 – May 2017

C8051F38x Microcontroller / STM32F051 Microcontroller / C / ARM

- Designed and constructed an autonomous robot capable of detecting a magnetic field generated by a guide wire
- Developed basic firmware and instruction set used by the robot to self-adjust and carry out movement instructions
- Implemented a communication protocol between the robot and the controller system using real-time inputs
- Collaborated and led a team of six and received an overall grade of 95% in the design studio course

INTERESTS

- Mahjong, video production, table tennis, DnD, watercolour, music, learning new skills