Janujan (Jay) Selvaratnam | Electrical Engineering
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A driven problem solver with a passion for connected technologies.

Technical Summary

Technologies	Git • SVN • Django • Heroku • PostgresQL • SQLite • Bootstrap • Excel
Hardware	Eagle • KiCad • Cadence • ADS • Multisim • LTspice
Languages	C • C++ • C# • Matlab • Python • SQL • HTML/CSS • Javascript
Personal Skills	Communication • Project Management • Leadership

Work Experience

Analog Engineering
Peraso Technologies
Internship

Sept. 2017 - Dec. 2017 | Toronto, Canada
- Characterized DAC, ADC and Crystal Oscillator(XO) on chip in conducted lab environment
- Designed circuit modifications to prepare test boards for various characterization tasks
- Developed and tested thermal diode correction algorithm on next generation chipsets

RF Engineering
Peraso Technologies
Internship

Jan. 2017 - April 2017 | Toronto, Canada
- Characterized next generation WiGig chipsets (IEEE 802.11ad) system level performance
- Developed an ATE program for quality control of fabricated RFICs using Matlab
- Characterized TX and PLL blocks on current products for system design investigations

DSP Researcher
Cognitive Systems
Internship

May 2016 - Aug. 2016 | Waterloo, Canada
- Developed driver code to implement frequency offset algorithm in C
- Created test framework to validate algorithm performance using Python
- Designed data visualization tool of carrier frequency offset map using Matlab

Sensor Design
BlackBerry Limited
Internship

Sept. 2015 - Dec. 2015 | Waterloo, Canada
- Performed characterization of BlackBerry Radar sensor board for distance ranging
- Developed a C# Desktop Application to interface with sensor board
- Tuned Time-of-Flight Sensor for optimal performance in specific environments
- Performed temperature and illumination tests to characterize onboard sensors

Projects

Social Development Wearable Device

Capstone Design Project: Designed an embedded device to provide data transparency for social workers in developing countries.
- Designed prototype board in Eagle (Schematic and Layout)
- Developed firmware for data aggregation and communication with server backend

NBA MVP Tracker

A Django web app to display a ranking of NBA MVP contenders throughout the season.

Chess Simulator

Developed C++ command line interface to play two player chess using OOP and STL.

Personal Website

Created a personal website using Bootstrap and HTML/CSS.

Education

University of Waterloo

Electrical Engineering Honours, B.ASc (2018)
Relevant Courses: Integrated Analog Electronics, IOT Processing, Microwave Circuits, Digital Electronics

Awards

NSERC
Jan. 2017

Undergraduate Student Research Award (USRA)
$4500 is awarded to the research team that takes on a student for work in the field.