Akash Kalimili

akashkalimili@gmail.com | 571-337-6664 | www.akashkalimili.me | https://github.com/akashkalimil | ID: 20618271

WORK EXPERIENCE

Intel Corporation - Wind River, Test Engineering Intern (Ottawa, ON) Jan - Apr 2016

- Developed a patch, cleaning up the Hypervisor, for VxWorks 653 3.1 RTOS which will be shipped to all users
- Deployed ROM payloads on FreeScale Multicore Communication Processors for testing and validation
- Ported, fixed, and added new scripts for test automation, increasing test pass rate by 8.2%
- Discovered defects/bugs and created detailed bug reports with Atlassian Jira in an Agile Development Environment

Gamelynx, Software Engineer (Waterloo, ON) Mar - Apr 2016

- Designed and developed pipeline and data scrapes of iTunes and Twitter for market analysis

RESEARCH

Wireless Inertial Navigation Research, Hardware Engineer (Alexandria, VA) 2014 - 2015

- Built an inertial position tracking system with wireless data communication, funded by Microelectronics Research Lab
- Designed signal conditioning, digitization, & serialization circuitry for data transfer via Bluetooth 4.0
- Wrote integration algorithms in Verilog using a NEXYS 3 Spartan - 6 FPGA

Prosthetics Research, Hardware Engineer (Alexandria, VA) 2013 - 2015

- Developed a prosthetic hand which replicated user's hand motions, funded by the Automation/Robotics Research Lab
- Second prototype included use of EEG headset and wireless data transfer from Arduino to prosthetic hand
- Featured at USA Science and Engineering Festival, Techstravaganza, and Malaria Free World Engineering Fair

PROJECTS

PillRemind May - Present

- Engineering a smart pill container to connect with mobile application for reminder system for users, funded by Velocity Start Program
- Currently working on inductive charging circuitry and web integration with an Intel Edison

Translaid, EngHack Oct 2015

- Created a gesture to speech translation system using Myo armbands with a Macbook Display and an external LCD for mobile use
- Developed pipeline program, to interface with Lua scripts and Arduino incorporating OS X El Capitan language libraries

SmartRemote Jan - Jun 2015

- Built an embedded system that can take control of any light switch using a motorized arm, inside a laser cut enclosure
- Developed with an Arduino Leonardo and RN-41 Bluetooth Module, allowed remote control of system

Cyclone Jan - Jun 2014

- Created a replica of the famous cyclone arcade game using solely digital and analog circuitry
- Designed circuitry for timer, score counter, sound system and led matrix for the user interface

AutoRadar Jan - Jun 2014

- Designed autonomous ultrasonic radar system with a Freeduino SB and custom cut Vex metal plates
- Programmed system to have autonomous mode and control mode with a joystick control interface

ThermoReg 2011 - 2012

- Rapidly prototyped circuit that maintained the temperature of ongoing research (The Effect of Ethanol on Planaria Regeneration Rates)
- Developed code on custom built PICAXE board to control heater state by the use of a relay

Airbnb New User Booking, Kaggle Competition Jan - Mar 2016

- Designed and tuned a random forest classifier, placing top 20 %, to predict where a new user would make his first booking
- Analyzed data to feature engineer categories such as number of clicks, session duration, device model used, and age

Photo Classify, Yelp Hackathon Mar - Apr 2016

- Created client that takes a user uploaded image and returns the Yelp page using transfer learning from Google Inception-V3 model
- Wrote python scripts, on Amazon Web Services, to scrape images of popular US Restaurants for model training

Machine Learning | Data Science, Thinkful Bootcamp Jan - Apr 2016

- Worked with CitiBike, Dark Sky, UN, Iris Flower, and US Loan data for analysis and prediction through out the 4-month boot camp
- Wrote python scripts analyze sentiments of twitter data regarding the US national election

EDUCATION

University of Waterloo, Waterloo, ON, Canada 2015 - 2020

BASc, Electrical Engineering

- **Relevant Courses:** Linear Circuits, Digital Circuits and Systems, Fundamentals of Programming, Engineering Design with Embedded Systems

Thomas Jefferson High School for Science and Technology, Alexandria, VA, USA 2011 - 2015

Jefferson Diploma

- **Relevant Courses:** Analog Electronics, Digital Electronics, Microprocessor System Design, Audio Electronics, A/R Microcontroller Systems

SUMMARY OF QUALIFICATIONS

Hardware: Microelectronics/Hardware Design, Analog/Digital Circuitry, Microcontrollers (Intel, Arduino), FPGAs, PCB Design, Testing, and Validation, Bluetooth 4.0, I^2C, SPI

Software: Cadsoft Eagle, OrCad PSpice, Arduino, Android, Matlab, Verilog, VHDL, AutoCad, Python, C++, C, Java, Git, SVN

Equipment: Power Supplies, Mixed Signal Oscilloscopes, Signal Generators, Spectrum and Logic Analyzers, Soldering Irons, DMMs, 3D printers, Machine Shop Equipment