VISHAL BABU

510-362-9310 | github.com/vishalbabu | vbabu@uwaterloo.ca

Work Experience

Hardware Design Engineer (present) NUVATION ENGINEERING

- Developed an automated test software for a wearable medical device to capture and analyze any errors occuring during ESD testing
- Optimized CSI and I2C bus protocols for multi-layer PCBs and flex-rigid PCBs
- Improved signal integrity on haptics driver to maximize power throughput and efficently of the haptics motor

Test Engineer (Sept. - Dec. 2015) TESLA

- Advanced a custom part library on Zuken and Altium by adding 50 new components used by teams across the organization
- Designed and built fully-automated test systems and procedures for Model S, Model X, and Tesla Energy products
- Performed component level thermal/electrical testing and validation

Program Manager (SQE) (Apr. - Aug. 2014)

- Actualized new testing methods to lower escape rate in iPhone production by 60%
- Developed new fixtures and IPQC test methods to capture process variations errors at international vendor factories
- Formulated surface measurement parameters to improve the quality of iPhone 6 surfaces

Wireless Protocol Engineer (Sept. - Dec. 2013)

- Responsible for automating and refining network specific (GPRS/EDGE/UMTS/LTE) test scripts on simulated cell towers
- Analyzed and debugged L2 and L3 communication protocol issues for BlackBerry native platforms
- Identified system-level integration issues with radio protocols (Fast Dormancy, CMAS, Handovers,etc)

Skills

Technologies: PCB Design, Signal Integrity, Automated Test Systems, Protocol Stack

Frameworks: Altium, Zuken, AutoCAD, JMP

Languages: C++, Python, Java, Shell Script, Ruby on Rails, SQL, Swift, MATLAB

Education

System Design Engineering
(Sept. 2012 – Apr. 2017)
Univeristy of Waterloo (Waterloo, Canada)

Projects

Patent Holder: Inventor of a non-invasive preventative vaccine delivery solution (Formulation V720: WO2012024767 - Google Patents Code)

URA: Designed an optical sensor to improve and maintain a healthy hydration level of an individual by analyzing liquid body waste

Kalos: Built an exercise station using an IMU and a custom-made pressure pad to assist users in performing exercises without obtaining muscle injury

Automated Shopping Cart: Prototyped a new shopping cart that automatically scans items as they are placed in the cart using RFID technology

Hobbies

Snowboarding, Guitar, Tennis, Learning new languages