

Vishal Babu

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LANGUAGES AND TECHNOLOGIES

- C++, Python, Java, JavaScript, HTML, CSS, PLC, FPGA
- Zuken, Altium, LabVIEW
- Arduino, TI Sensor Tags, AutoCAD, SolidWorks, JMP

WORK EXPERIENCE

Tesla Motors

Sept — Dec 2015

Powertrain Test Engineer

- Developed custom part libraries on Zuken and Altium for 30 different electronic components (relays, actuators, contactors, octocouplers, etc) used for the Model S Powertrain design.
- Designed, built, and automated a Leak tester for the Models S Large Drive Inverter reducing production time by 40 minutes.
- Implemented a new End-of-Line test protocol and test station for Tesla's PowerPack.

Apple Inc

(May - August 2014) Jan — May 2015

iPhone Manufacturing Design

- Characterized new testing methods to lower escape rate in iPhone frame production by 30%.
- Formulated and actualized surface measurement parameters to improve quality of the new iPhone 6 metallic surface.
- Developed new fixtures and IPQC test methods to eliminate process variation errors in vendor factories resulting in 10% higher yields.
- Traveled to vendor sites in China to implement test protocols I developed for the iPhone 6 frame design.

BlackBerry

(Jan - Apr 2013) Sep — Dec 2013

Wireless Protocol Tester

- Analyzed & identified system-level integration issues with radio (**Fast Dormancy, CMAS, Handovers, Silent Redial, Cell Re-selection, and Call drops**) on BlackBerry native platforms.
- Developed & executed Python test scripts on network simulators (**Anite SAS, Anritsu, Aeroflex, Spirent**) to evaluate devices in the interoperability testing phase.
- Developed an automated script on Python to reduce time analysis of service carrier field studies by 50%.

Medicine for a Better Tomorrow

Jun 2010 — Present

Co-Founder

- Inventor of world's first and only non-invasive preventative vaccine delivery solution (Formulation V720).
- Patent Holder (US 37695010 P 20100825 • CA 2011000835 W 20110720).

TECHINICAL EXPERIENCE

- **Zuken and Altium:** Designed PCB schematics and created 30 new component schematics for custom electronic parts.
- **Python Scripting:** Wrote python scripts to validate telecom-carrier protocols on BlackBerry devices.
- **Supplier Chain:** Traveled to international vendor sites (Foxconn-China, JGP-China) for implementation of self developed processes for iPhone and iPod frames.

PERSONAL PROJECTS

- **Arduino (C++):** Programmed an Arduino UNO chip that helped facilitate memory improvement for patients with Parkinson and Alzheimer related ailments.
- **Automated Shopping Cart (Java):** Prototyped a new shopping cart that automatically scans items as they are placed in the cart using RFID technology.
- **Personalized Workout App (Java):** Designed an app that allowed users to custom build their own workout plans based on their fitness goals and requirements.

EDUCATION

System Design Engineering-Term 3B

Sept 2012 — Jun 2017

University of Waterloo (Canada)

Relevant Courses: Data Structures and Algorithms, , Embedded Systems and Microprocessors, Electronic Instrumentation and Design, Digital Computation - C++.