

Jeet Mehta

Mechatronics Engineering

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Technical Skills

Hardware:

- **Technologies:** Altium Designer, LTSpice, Autodesk Inventor, VHDL, Assembly, UGS NX
- **Electronics:** I2C, SPI, USB, FPGA, Arduino, PLC's
- **Lab Skills:** Soldering, Oscilloscopes, Power supplies, Multimeters
- **Machining:** Drill press, Mill, Saw

Software:

- **Languages:** C, C++, Objective-C (iOS), Python, JavaScript/HTML/CSS
- **Frameworks:** Numpy/Scipy, Matplotlib, Wxpython, Django, Backbone
- **Tools:** Matlab, Git, Jenkins, MySQL, Amazon AWS

Projects

Embedded Music Player (Microprocessors & Interfacing)

- Designed and programmed the hardware on the Nios II FPGA board
- Developed the firmware using C, created the architecture to read data from a FAT file system and interface with a microcontroller to output audio

Line Following Robot (Sensors and Instrumentation)

- Developed and populated a PCB using various sensors and actuators such as Hall Effect sensors, IR phototransistors, Thermistors, DC motors etc.
- Implemented the line following algorithm in C, and successfully completed all test tracks

University of Waterloo Robotics Team (UWRT)

- Worked on the drive system of the Mars Rover autonomous robot
- Developed algorithm to sense and correctly read voltage pulses from a remote radio controller with Arduino

Real Time Operating Systems (RTOS)

- Implemented a dynamic half-fit memory allocation scheme using C
- Evaluated various synchronization techniques using semaphores and tight polling

Relevant Experience

Hardware Design Engineer, Lumotune

Waterloo, Ontario — September 2015 - December 2015

- Designed PCB's in Altium Designer by creating preliminary schematics/layout and selecting the appropriate components for final assembly
- Developed firmware in C for Atmel microcontrollers, involved interfacing via various protocols such as SPI, I2C, USB
- Tested and debugged the hardware using both schematic/layout analysis and practical lab skills/tools
- Drafted mechanical drawings of the enclosure with Autodesk Inventor and performed impromptu machining tasks during assembly

Python/iOS Engineer, Athos

Redwood City, California — January 2015 - April 2015

- Integrated C++/Objective-C functionality with a Python codebase using Numpy/Scipy and Amazon AWS
- Developed a full scale Cython-based simulation of the iOS app's EMG signal processing functionality
- Implemented a GUI wrapper on top of the Cython simulation complete with a MySQL backend

Agile Engineer, Pivotal Labs Inc.

Toronto, Ontario — May 2014 - August 2014

- Developed a social-networking single-page web application (SPA) for a large client company
- Implemented MVC software architecture using Backbone.js and responsive UI with Gumbo
- Assisted in developing a middleware server using Django for handling routing, OAuth workflows, and session management

Software Developer, BlackBerry

Waterloo, Ontario — September 2013 - December 2013

- Developed several PowerShell, Groovy, and batch scripts to automate large-scale software deployment processes
- Designed, created and maintained build jobs on Jenkins CI for various internal BlackBerry products

Mobile QA Testing Specialist, Kik Interactive Inc.

Waterloo, Ontario — January 2013 - April 2013

- Developed automated test scripts using UI Automation (Javascript) for iOS and Calabash for Android
- Created functional tests to examine features of Kik Messenger for iOS and Android
- Executed over 400 manual test cases to ensure successful product releases

Education

University of Waterloo

Candidate for BSc in Mechatronics Engineering — 2012 - 2017

- Relevant courses include Microprocessors and Interfacing (MTE 325), Power Electronics and Actuators (MTE 320), Real Time Operating Systems (MTE 241), and Sensors and Instrumentation (MTE 220)

Activities and Interests

- Qasra Cricket Academy Vice-Captain, also part of the top 24 Canada U18s and top 15 Ontario U18s
- Co-founder of youth advertising company for a 2-week entrepreneurial Impact Microcredit competition

Distinctions and Awards

- University of Waterloo President's Scholarship for Distinction
- University of Waterloo Alumni @ Microsoft Entrance Scholarship