Shaheen Moubedi
ELECTRICAL HARDWARE ENGINEER

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WORK EXPERIENCE

Snap Inc.
Los Angeles, CA, USA

Spectacles Hardware Intern
September 2016 – Dec. 2016

- Helped design, debug, and bring-up various hardware systems found in Snapchat's camera consumer electronics
- Focused on digital power-management logic, battery charger evaluation, sensor integration, and cable protection

Tyto Life LLC
Burlingame, CA, USA

IoT Hardware Intern
September 2015 – Dec. 2015

- Worked on wireless electronics for the home automation market
- Lead the design of a modular development board, as well as circuits for low-power battery selection and back-EMF transient suppression
- Assisted in Radar/WiFi/BLE antenna design and tests including:
  - Feed point placement and routing studies
  - Efficiency and return loss studies for mechanical topologies

Apple Inc.
Cupertino, CA, USA

Watch Hardware Intern
January 2015 – May 2015

- Involved in the ramp and release of their debut product
- Programmed an automated hardware validation system
- Designed and fabricated test boards used to:
  - Log increases in dendrite formation and contact resistance across board-to-board connectors under environmental stress
  - Simulate power-supply switching noise up to 10MHz

PERSONAL PROJECTS

Vocal Attenuator (Capstone)
Part of a team, developing technology that aims to reduce noise pollution in sensitive environments. Our wearable headset solution attenuates the audible power produced by a user's voice through directional active noise cancelation. This is achieved with an array of microphones and speakers, coupled with signal processing and feedback systems.

Portable Signal Generator
Developed a board to digitally synthesize sine, square, and triangle waveforms of up to 5MHz. The phase, frequency, amplitude, and DC offset can be adjusted either manually through on-board controls, or a custom web interface that is hosted locally over Ethernet. Can source/sink up to 100mA of continuous current, and can be battery operated.

LED Music Visualizer
Developed a fully-analog circuit that would drive a strip of LEDs to the beat of any headphone audio source. Its bandwidth and sensitivity can be manually tuned to match the music genre/quality and can supply up to 250mW of power.

TECHNICAL SKILLS

Experienced in analog and digital design
- Power architectures, regulators, PMICs
- SPI, I^2C, USB, Ethernet interfaces
- Familiar with antenna design

Schematic capture, layout, routing, and simulation
- Allegro/OrCad, Altium, EAGLE, ADS, LTSpice, Multisim
- Proficient at reviewing boards and schematics

Board bring-up and prototyping on PCB, Flex, Perfboard
- Exposure to DFM and production ramping
- Soldering 0201 and various fine-pitch packages
- Power Analyzers, Network and Spectrum Analyzers, Active/Differential/Current Probes, Signal Generators

Low-Level firmware development
- C, VHDL, Assembly - ARMv7 and x64

High-Level application development
- C++, C#, JavaScript, Java

Web-application development
- HTML5, CSS3, jQuery, Angular, Node

GPIB and Ethernet automation scripting
- Agilent, Keysight, Keithley SCPI libraries
- Ruby, Python, MATLAB, Shell, Batch, SQL

EDUCATION

B.A.Sc. Electrical Engineering – University of Waterloo
- Radio and Microwave Circuits, RF Wireless Systems, Analog and Digital Communication, Integrated Digital Electronics, Integrated Analog Electronics, Power Electronic Converters

Waterloo, ON, Canada
2012 – May 2017