

Connie Ma

SKILLS

Electrical / Hardware	Languages / Software	Other Tools
<ul style="list-style-type: none">Breadboard circuit assemblyRC/LRC circuit analysisAltera Cyclone II FPGAPCB assembly via reflow solderingRS232	<ul style="list-style-type: none">C, C++Python, Ruby, JavascriptScala, Akka and Spray.ioJava, Android APISQLASM / Program disassembly (IDA Pro)	<ul style="list-style-type: none">Amazon Web Services CLI and Tools (EBS, EC2, S3, Route53, RDS, Kinesis, Lambda)Git, Subversion, JIRA, CI serversBroadcom WICED Wi-Fi frameworkWireshark

ACADEMIC PROGRAM

University of British Columbia, Vancouver, BC

Bachelor of Applied Science in Computer Engineering (Software Option), Graduating May 2018

CO-OP WORK EXPERIENCE

Neurio Technology Inc., Vancouver, BC

MAY 2015 – SEP 2016

Firmware Development

- Designed and implemented an HTTPS file upload feature for a prominent backend release of the Neurio Home Energy Monitor, increasing productivity of the device during OTA-upgrade times by 25%
- Implemented software flow control for another major firmware internal project, which additionally demanded learning and making use of XBee radio AT commands in the span of 1.5 weeks

Full Stack API / Web Development

- Implemented backend release features for Neurio's REST API. Wrote endpoints for user energy forecast data, device commissioning, user and location settings, appliance data, and other features
- Wrote scalable database migrations to the Neurio production SQL server
- Developed and maintained core web features such as historic graphs, energy consumption forecast calculations, in-app notifications, and other smaller features for Neurio's web application
- Redesigned and implemented the Neurio API documentation website in Ruby / Ruby-on-Rails
- Troubleshooted a production backend problem that was unrelated to API / Web and communicated with AWS support to debug memory leak issues; ultimately increased performance of the calculation by 60%

Qooway Rewards Inc., Richmond, BC

MAY 2014 – AUG 2014

Junior Android Developer

- Developed two major release features: a photo gallery and a user "check-in" protocol for Qooway's consumer app
- Designed and implemented a REST API client test program that could run iterations of API calls to a server database; making use of this client decreased predicted downtime of the server by 10%

TECHNICAL PROJECTS

Authorized Security Analysis of GridGear Solutions, UBC

SEP 2016 – DEC 2016

- Assessed the confidentiality and integrity of GridGear's smart metering system by developing multi-tiered adversary models. Used attack vectors such as password cracking, eavesdropping with Wireshark, and device impersonation
- Project won first place awards in Best Security Analysis, Best Presentation, and Best Video in the course

OTHER TECHNICAL EXPERIENCE

UBC Thunderbots Team, UBC

SEP 2014 – MAY 2015

- Wrote scripts and tested implemented plays and tactics based on the Thunderbots robot software
- Participated in the development of a particle filter feature to determine location of the ball for robot orientation, using Monte Carlo density estimation algorithms

ACTIVITIES AND INTERESTS

- Software and hardware security (achieved highest course mark of 100% in CPEN 442 Computer Security)
- Cross-country running, NBA, traveling, RTS / MOBA games, and learning foreign languages