

AARON VONTELL

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Android, Modern Full Stack Web, UI Design, Accessibility, Quantum Programming, Machine Learning

EDUCATION

Massachusetts Institute of Technology (MIT)

B.Sc. Computer Science and Engineering (GPA 4.71)

Cambridge, MA

September 2014 - Present

- **Relevant Coursework:** Design and Analysis of Algorithms, **Graduate Machine Learning**, Computation Structures, Software Construction, User Interface Design, Automata Computability and Complexity, Quantum Computation, **Artificial Intelligence**, Communication Networks, Computer System Engineering, Startup Experience 1 & 2, **Business Creation**, Multimodal UIs, Cognitive Robotics
- **Technical Skills:** Kotlin, React, React Native, Android, AngularJS, NodeJS, Java, JavaScript, Python, User Interface Design, Rigetti Forest, RESTful APIs, HTML5, CSS3, MaterialCSS, FPGA Programming, Virtual Reality, Augmented Reality, Heroku, Spring Boot, Linux, Git, Gamification, Google APIs, Machine Learning, Sketch, Photoshop, Postman

EXPERIENCE (see more at avontell.com/#/resume (Battlecode, startups, contracts))

CSAIL Decentralized Information Group (MIT)

Undergraduate Researcher - Android

Cambridge, MA

September 2016 - Present

- Researched the current landscape of **mobile accessibility** and accessibility regulation, lead the design of a mobile accessibility framework for developers. Implemented this system for Android.
- User testing and design iteration of an Android user interface framework.
- Won a year-long funding award for completing my research, paid by The Seth Teller Fund.

Rigetti Quantum Computing

Junior Quantum Engineer - Software Intern (Quantum Programming)

Berkeley, CA

June 2017 - August 2017

- Designed and implemented algorithmic techniques for static analysis and **optimization of quantum programs** and circuits.
- Implemented various quantum algorithms (amplitude amplification, classical processing of Shor's algorithm, superdense coding).

Contractual Work / Vontech Software, LLC

Various Companies and Locations

- Developed various static websites for companies, such as saintmarkboston.com
- Developed full stack applications for web and mobile, such as InTouch (in-touch-site.herokuapp.com) and Sysdyne Concrete, built and designed using Node, Heroku, and AngularJS.
- Served as interim Lead Developer for the startups Parco and CarSwipe.
- **Lead Developer of InTouch**, a prison connection platform written using Angular and NodeJS

RLE Quantum Photonics Laboratory (MIT)

Undergraduate Researcher - Quantum Information Processing

Cambridge, MA

September 2016 - Present

- Used an FPGA programming library in Python to perform conditional pulse sequences on Nitrogen vacancy centers in diamond. See avontell.com/papers/pulse.pdf
- Helped design and implement a neural network to classify spectrum scans. See avontell.com/papers/utility.pdf
- Implemented a tunable (frequency and polarization) microwave resonator for excitement of NV centers at 2.87 GHz

Cigna Health and Life Insurance

Software Intern (Android and Full Stack Web)

Bloomfield, CT

May 2014 - August 2016

- Built web and Android software for health care applications, using AngularJS, Android Studio, RESTful APIs, **gamification**, and **virtual reality**.

PROJECTS (see many more at avontell.com/#/projects)

Hackathons: 2nd Place at YHACK 2016, 1st Place at SimHACK, Best Use of AWS at HackGT 2016, Best Made from Scratch at HackMIT 2017, Top 8 at HackGT 2017 (<https://devpost.com/vontell>)

FancySlider: An Android library which creates weight and height-like scale sliders. Extremely efficient through the use of a dynamic RecyclerView.

Rally: An Android application, available on the Play Store, which helps friends find places to meet which are equidistant from their locations.