

# Ian Christie

Software Engineer

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## Skills

**Experienced** - Java | Objective-C | Matlab | iOS | Android | MVC | Bluetooth (Classic/Low Energy) | Feature Experimentation | git | Mac

**Familiar** - Python | SQL | JavaScript | C++ | C | JNI | Scheme | AngularJS | HTML | CSS | NodeJs | Image Processing | Functional Programming | AppEngine | MapReduce | Firebase | Linux Clusters | Linux

## Experience

Google Inc.

Sept 2016 - Present

Engineering Resident, Mountain View, CA

1-year program for recent CS graduates to gain industry experience at Google scale.

### Project 1: Offline Services with YouTube Mobile Architecture

- Completed end-to-end intelligent playlist sync strategy to ensure that Youtube Red and emerging market users consistently have access to offline content. Increased offline watchtime by 0.86%.
- Migrated iOS client infrastructure dependency injection framework to increase developer velocity, code cleanliness, and quality of YouTube iOS applications.
- Analyzed lightweight Core Data migration and its effect on application startup time.

### Project 2: Nearby URL Discovery in Chrome with Physical Web

- Developed a feature in Chrome to wirelessly share links over BLE with nearby Android users.
- Prototyped and optimized peer-to-peer webpage transfer over BLE from Raspberry Pi 3 to Android. Achieved a transfer rate of 32.8 KB/s (7.5x faster than previous attempts).
- Enhanced UX of Physical Web prototype app by moving work off of main thread to reduce dropped frames.
- Refactored Chrome share sheet to allow for easy inclusion of generic components with intent filters.

Brandeis University

Aug 2014 - May 2016

Teaching Assistant: Discrete Mathematics, Theory of Computation, Scientific Data Processing

- Explained complex concepts in lecture, small group, and individual settings.
- Held bi-weekly office hours for individual student discussion.
- Managed lab code and graded labs and homework.

Dr. Stephen Van Hooser Neuroscience Laboratory

Feb 2013 - May 2016

Computational Modeler and Analyst

- Converted code from Matlab to C++ for directional selective thalamic model.
- Created educational software to model basic neuronal networks.
- Headed project to create directional selective cortical model. Work was Published in Journal of Neurophysiology.

Goldman Sachs

May 2015 - Aug 2015

Software Engineer Internship, New York City, NY

- Developed UX enhancement to increase usability by surfacing more used items for a visual database querying web application on front and back end.
- Integrated Symphony chat into sale services applications to increase usability, further community involvement, and reduce strain on developers.

Brandeis University, Waltham, MA

Aug 2012 - May 2016

BS in Neuroscience & BS in Computer Science with Highest Honors, GPA: 3.974

### Relevant Courses

Advanced Java & C | Data Structures | Operating Systems | Structure & Syntax of Computer Languages | Discrete Mathematics | Computational Neuroscience | Database Management Systems | Algorithms | Mobile Application Development | Theory of Computation | Scientific Data Processing | Data Analysis | Linear Algebra

### Personal Projects

<https://www.github.com/iankchristie>

- iOS application to reduce cost of gel electrophoresis with portable image processing.
- Attempted to solve P vs. NP Complete problem using computational, mathematical, and topological approaches.
- Android application that uses device APIs and machine learning to guess the BAC of the user.
- Web app search engine that indexes the work of Shakespeare.
- Android BLE peer-to-peer tic-tac-toe application.
- Bubble Breaker (*ongoing*): Multi-platform pen-pal-like app to help people break out of their "bubble".

### Awards

Lerman-Neubauer Fellowship | Brandeis Academic Achievement Award | Max Chretien Award in Computer Science | Division of Science Prize for Outstanding Research Accomplishment in Neuroscience | Dean's List | Phi Beta Kappa | Summa Cum Laude

### Publications

Christie IK, Miller P, Van hooser SD. "Cortical amplification models of the experience- dependent development of selective columns and response sparsification." J Neurophysiol. 2017;;jn.00177.2017.

## Outdoor & Leadership

### Bike & Build

Summer 2013, Summer 2016

#### Participant & Leader

Part of a team of four that led 32 young adults on cross-country bike trip that participates in builds and raises funds and awareness for affordable housing.

### National Outdoor Leadership School

Jan 2015 - Apr 2015

#### Semester in Patagonia Student

Experientially studied environmental ethics, sea kayaking & mountaineering technical skills, wilderness medicine, and leadership in Patagonia, Chile

### Boy Scouts of America

May 2010

#### Eagle Scout

Achieved highest rank attainable from Boy Scouts of America.