

# Joshua Yuan

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## EXPERIENCE

### Google, Google Wallet: Android — Software Engineer Intern

Summer 2017

- Wrote software in Java to implement full stack architecture for Android
- Built features in Wallet, integrating with Google APIs
- Developed server-side code implementing RPCs and Pub/Sub patterns
- Followed Material Design specifications and built sleek user interfaces
- Used Robolectric, Mockito, and Espresso for Java unit-testing

### Jacobs Institute for Design Innovation — Student Supervisor 2

September 2015 - Present

- Supervises and helps makerspace users throughout the week
- Teaches weekly 3D printing and laser cutting classes
- Works with design specialists on functional projects

### UC Berkeley EECS Department, CS61A — Course Tutor

August 2017 - Present

- Works with students via office hours, mentoring, and review sections
- Teaches fundamental programming skills in Python

## PERSONAL PROJECTS

### Carousel — PennApps XV

- Developed software for a special vending machine device which organizes electronic component bags
- Wrote code for Node.js webserver to run MongoDB on
- Built function to retrieve detailed part information from a barcode

### Autonomous Suitcase — PennApps XIV

- Led software development in Python to interface robot with ROS by integrating packages for Kinect and tracking algorithms
- Managed electronics and power distribution system

### 3D Scanner — PennApps XIII

- Wrote Python code for motor encoders with ROS
- This was a **top 10 hack** and won the **best use of rapid prototyping award**

### 163 Mobile Card Game — Android application

- Created an original math based single player card game
- Implemented linked lists for card queuing feature with a binary tree implementation with custom Card Node classes to store card data
- Worked with Shared Preferences to keep high scores locally

### Electric Longboard — Personal Project

- Designing and building from scratch fully electric-powered longboard
- Controlled by Wii Nunchuck via an Arduino to spin a 192kv brushless outrunner with an FVT 120A ESC, all powered by 2 5000mAh 3S 40C LiPo batteries with a custom BMS

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## EDUCATION

### UC Berkeley Computer Science, B.A.

Class of 2019

## SKILLS

**Confident with** Java, Python, Android development, Android testing, Git, Guice & Dagger, Linux/Unix, HTML/CSS/Javascript, Jekyll, CAD software, prototyping and fabrication, Adobe Creative Suite, Bash + Tmux

**Familiar with** ROS, C, C++, Node.js, Protobufs

## EXTRACURRICULAR ACTIVITIES/AWARDS

**UC Berkeley Men's Ultimate  
Team Brand Manager**

**Devpost Campus Ambassador  
for UC Berkeley**

**Top 10 Hack at PennApps XIII**

**Best Use of Rapid Prototyping  
at PennApps XIII**

**#4 out of 400 for CS61C  
Optimization Project**

**ARRL HAM Radio License  
Technician Class (KK6BLD)**

**UC Berkeley, IEEE General  
Member**

**Eagle Scout of BSA Troop 453**

**Triple Crown of National High  
Adventure**