

BZ

Brian Zhang

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## Skills

### Programming Languages

Java Strong  
C++

Python Intermediate  
HTML/CSS  
Javascript  
C

Assembly Familiar  
Netlogo  
Scheme

### Technologies Used

Flask, jQuery, Firebase, Unix/  
Linux, Unreal Engine 4,  
AngularJS, MongoDB, Android,  
flex, bison, regex, Retrofit, CLM

### Current Coursework

Software Engineering  
Operating Systems

### Past Coursework

Linear Algebra/Multi/Diff Eq.  
Professional C++  
Intro to Games Programming  
Computer Architecture  
Game Engines  
Building a Tech Startup  
Artificial Intelligence

## Education

### University of Southern California

Computer Science, B.S., May 2017 graduation

### Stuyvesant High School

Regents Honors Diploma

## Experience

### USC Aerial Robotics | Software Engineer

Software engineer on the USC Aerial Robotics (AR) Computer Vision Team. Using *OpenCV* to detect moving roombas and shepherd them over a finish line for the International AR Competition.

### Expedia, Inc. | Software Engineering Intern

Hotwire Transport team. Developed a new, core transport stack for the *Android* App using *Retrofit* and the Expedia API. Completed requirements for a 10 week project in 3 weeks and I designed my own deliverables thereafter.

### USC Robotics Research Lab | Research Assistant

Built and optimized code with *Kinect* and the *CLM*-framework to develop a computer vision system that tracks detailed sensory information to enable research.

### Fashion & People | Software Engineering Intern

Full-stack developer. Built various new web pages in *HTML*, *CSS*, and *Javascript/AngularJS* using agile development methods.

### MixSpot | Software Engineering Intern

Performed full-stack development using *HTML*, *Javascript*, and *Python* on *Flask* to create a mobile-optimized news website.

### Octopart | Software Engineering Intern

Contracted, part time job developing rules for a *regex* engine in *Python* to classify large quantities of electronic parts.

Los Angeles, CA

Fall '14 – Spring '17

New York, NY

Fall '09 – Spring '13

Los Angeles  
Sep '16 – Current

San Francisco  
Jun '16 – Aug '16

Los Angeles  
Mar '16 – May '16

Los Angeles  
Jan '16 – Feb '16

New York  
Jul '15 – Aug '15

New York  
Sep '14 – Oct '14

## Projects

### Cause Bar | Software

Sentiment analyzer for charities, so donors can make better informed decisions about donating to charities. Built on *Firebase*, *D3*, *Square*, and *IBM Bluemix*.

Jan '16 – May '16

### Borrow Tomorrow | Software

Online peer-to-peer borrowing/lending service using *Ruby on Rails*, aimed at enabling the mostly untouched shared-items economy.

Jan '16 – May '16

### Jauntlet | Software

Jousting game built using *C++11* and the *Unreal Engine*. I focused on character movement, and general game logic, but still moved between all aspects of the project including getting character meshes and setting up the gameplay map.

Nov '15 – Dec '15

### Myo: Fighter of the Streets | Hardware + Software

Calhacks 2014. Created a control system for Street Fighter II using *Myo* armband from Thalmic Labs. Game performs actions based on motion and gesture inputs.

Oct '14

### Facial Recognition Sentry Gun | Hardware + Software

Modded a standard automatic nerf gun at HackCooper 2014. Uses *OpenCV* and an *Arduino*-controlled stepper motor for detecting faces and aligning the gun's camera.

Feb '14

### Web Explorer | Software

High school software development class group final project. Created a physics engine using *Javascript* & *jQuery* to transform any webpage into a 2D platforming game.

Jun '13

Presented at Google NYC in June 2013. Presented at NYTM in July 2013.