



## Brian Zhang

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## Skills

### Programming Languages

Java Strong  
C/C++

Python Intermediate  
HTML/CSS  
Javascript

Assembly Fairly Used  
Netlogo  
Scheme

### Technologies Used

Flask, jQuery, Firebase, Unix/  
Linux, Unreal Engine 4/5,  
AngularJS, MongoDB, Android,  
flex, bison, regex

Knowledge of data structures  
and search/sort algorithms;  
Intermediate understanding of  
higher-level and theoretical CS  
(machine learning, genetic  
algorithms, computer vision)

### Academic

Knowledge of classical  
mechanics & applications  
through engineering (Robotics,  
bridge rectifiers, pulse-width  
modulation)

### Current Coursework

Software Engineering  
Operating Systems

### Past Coursework

Intro to EE  
Intro to Programming  
Data Structures/Algorithms  
Discrete Math  
Linear Algebra/Multi/Diff Eq.  
Intro to Java/Networks/  
Threads  
Professional C++  
Intro to Games Programming  
Algorithms  
Computer Architecture  
Game Engines  
Building a Tech Startup  
Artificial Intelligence

## Education

### University of Southern California

Computer Science, expected May 2017 graduation

### Stony Brook University

Electrical Engineering

### Stuyvesant High School

Regents Honors Diploma

Los Angeles, CA

2014–Current

Stony Brook, NY

2013 – 2014

New York, NY

2009 – 2013

## Projects

### Borrow Tomorrow (WIP) | Software

January 2016 – May 2016

Built an online peer-to-peer borrowing/lending service, aimed at enabling the mostly untouched shared-items economy.

### Jauntlet | Software

November 2015 – December 2015

Built a game from scratch 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.

### Portal Immersion | Hardware + Software

November 2014

Used Kinect, Oculus Rift, and Myo to create a hyper-realistic virtual gaming experience. I primarily worked on the Kinect for movement and gesture control.

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

October 2014

Calhacks 2014. Created a control system for Street Fighter II using Myo armband from Thalmic Labs in a team of 3. Game performs actions based on motion and gesture inputs.

### Loudspkr | Software

April 2014

Created at HackNY 2014 in 24 hours in a team of 4. Allows the user to join a regional chatroom based on nearest foursquare venue. Technologies used: Foursquare API, Python, Flask, HTML, jQuery, Javascript, Firebase.

### Facial Recognition Sentry Gun | Hardware + Software

February 2014

Modded a standard automatic nerf gun with 3 other students at HackCooper 2014. Uses OpenCV and an arduino-controlled stepper motor for detecting faces and aligning the gun's camera.

### Web Explorer | Software

June 2013

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

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

## Experience

### Expedia, Inc. | Software Engineering Intern

San Francisco

Hotwire Transport team. Developing a new, core transport stack for the Android Application.

June 2016 – August 2016

### USC Robotics Research Lab | Research Assistant

Los Angeles

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

March 2016 – May 2016

### Fashion & People | Software Engineering Intern

Los Angeles

Full-stack developer. Worked on building various new pages for the website using agile development methods.

January 2016 – February 2016

### MixSpot | Software Engineering Intern

New York

Performed full-stack development to create a mobile-optimized news website.

July 2015 – August 2015

### Octopart | Software Engineering Intern

New York

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

September 2014 – October 2014