

# **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

Knowledge of data structures and search/sort algorithms, regular expressions; 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

# **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

Los Angeles, CA

Stony Brook, NY

2014-Current

2013 - 2014

New York, NY

2009 - 2013

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 from the Myo. Uses the Myo API (C++) and Objective-C.

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

Hotwire Transport team. Worked on building a new, core transport stack for the Android Application.

**USC Robotics Research Lab** | Research Assistant

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

Fashion & People | Software Engineering Intern

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

MixSpot | Software Engineering Intern

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

Octopart | Software Engineering Intern

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

San Francisco

June 2016 – August 2016

Los Angeles

March 2016 - May 2016

Los Angeles

January 2016 - February 2016

New York

July 2015 – August 2015

New York

September 2014 – October 2014