



# 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

Intermediate understanding of  
higher-level, 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

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.

### Stony Brook University

Electrical Engineering, B.S.

### Stuyvesant High School

Regents Honors Diploma

## Experience

### 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.

## Projects

### Borrow Tomorrow (WIP) | Software

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

### Jauntlet | Software

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

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

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

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

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

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.

Los Angeles, CA

Fall 2014– Spring 2017

Stony Brook, NY

Fall 2013 – Spring 2014

New York, NY

Fall 2009 – Spring 2013

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

January 2016 – May 2016

November 2015 – December 2015

November 2014

October 2014

April 2014

February 2014

June 2013