

# Haifeng Liu

## Software Engineer

Foster City, CA - Email me on Indeed: [indeed.com/r/Haifeng-Liu/fe0c4e3979224155](https://www.indeed.com/r/Haifeng-Liu/fe0c4e3979224155)

To utilize strong coding ability, deep understanding of CS and math, good mastery of data structures, algorithms, database and web application development to seek for a full-time position as a software engineer

### WORK EXPERIENCE

#### Software Engineer

IXL Learning - San Mateo, CA -

July 2017 to October 2017

- Implemented and created interactive questions for Spanish & Math using Java
- Cooperated closely with curriculum designers to fulfill the requirements of specs
- Implemented the duplicate prevention rules for each question and tested with Problem Frequency Aggregator tool
- Created displayable front-end components using React and enabled screen reader function

Carnegie Mellon University - Pittsburgh, PA -

September 2016 to November 2016

- Built CrowdPlay allowing users to share their favorite music based on YouTube and SoundCloud APIs
- Created assisted workflow when adding songs and auto-populated lyrics with other metadata to minimize friction
- Implemented intelligent searching function for CrowdPlay library and used Ajax for improving performance
- Stored music and user data using PostgreSQL and created charts of top songs and top artists based on data analysis

- Traced and showed active/offline state, currently played music and recently played music on the user's profile page

Django Based Nano-blogging Website Fall 2016

Carnegie Mellon University Pittsburgh, PA

- Built a Django based nano-blogging website with Ajax, jQuery and Bootstrap allowing users to share thoughts
- Implemented user registration, authentication, email verification, social feed, image uploading and user-following
- Created profile page allowing users to edit information, check followers' posts and send password changing requests
- Deployed the website on DigitalOcean using Nginx and Gunicorn

Carnegie Mellon University - Pittsburgh, PA -

March 2016 to May 2016

- Utilized OpenCV library to conduct detections of coins via a web camera

- Used Hough Circle algorithm, image color conversion, template comparisons to categorize different kinds of coins
- Fetched real-time exchange rate from the Internet by currencylayer API and calculated the amount of target currency
- Displayed the interactive user interface during the transaction process and billing information when finished

Dynamic Storage Allocator - Pittsburgh, PA -

March 2016 to May 2016

- Implemented a dynamic storage allocator for C programs supporting malloc, free, realloc and calloc functions
- Utilized segregated doubly linked lists to optimize throughput and space utilization

Panzer Battle Game - Pittsburgh, PA -

September 2015 to November 2015

- Designed a one-to-one panzer battle game where users can choose terrains and change directions, speed and ammo
- Used C++ and OpenGL to draw changing terrains which are based on different ammo explosions
- Traced the highest and lowest points of the terrain for performance improvement when drawing the new terrain
- Displayed the quasi-real-time updates for wind chart, blood bar, ammo explosion and user switch

## EDUCATION

### **Master of Science in Mechanical Engineering**

Carnegie Mellon University - Pittsburgh, PA

December 2016

### **Bachelor of Engineering in Theoretical and Applied Mechanics**

Sun Yat-sen University - Guangzhou, CN

June 2015