

# BEIQI GUAN

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## OBJECTIVE

To obtain an opportunity to serve as a software engineering intern to get experience with software development in a company.

## EDUCATION

**Carnegie Mellon University, School of Computer Science**

**Pittsburgh, PA**  
Expected Spring 2018

- *Master of Entertainment Technology*
- Relevant courses: **Cloud Computing**

**University of California, Los Angeles**

**Los Angeles, CA**  
Spring 2016

- *Bachelor Of Science in Computer Science*
- **Dean's Honor List** in Spring Quarter 2015
- Relevant courses: **Web Applications**, Database System, Algorithm & Complexity Analysis, Computer Networks, Computer Vision, **Medical Image Processing with Machine Learning**, **Software Engineering**, **Scalable Internet Service**

## SKILLS

**Web Application Development:** NodeJS, AngularJS, ReactJS, Ruby on Rails, MySQL, MongoDB

**Cloud Computing:** AWS, Azure, Google Cloud Platform; Big Data Analytics, MapReduce, Auto-scaling, Docker, Kubernetes

**Programming Languages:** C++, Java, Javascript, Python, C#, C, Bash, Matlab

## PROJECTS

**Ellison (MERN stack Web Application)**

**Winter 2017**

- A web application that creates sales agent chatbots for businesses, with a dashboard interface to manage setting and data.
- Finished the whole front-end application development in **two weeks** in a team of two, under an **Agile Development Environment**.
- Wrote **ES6** standard javascript code in **React + Redux framework**, which gives the advantage of having only one Store.
- Implemented frontend functionalities in two parts: JSX in React for page logic and Redux modules for data fetching/updating.
- Configured the application for production, and deployed it to the **AWS Elastic Beanstalk** for production usage.

**Facebot (MEAN stack Web Application, Link: <https://dsa-shin.com>)**

**Summer 2016**

- A web application that helps users create chatbots on Facebook's messenger platform built using MEAN stack.
- Wrote 1500+ lines of javascript code. Designed and developed frontend under **AngularJS** framework.
- Used **Google Angular Material** CSS to beautify the page, and **Bootstrap** CSS to structure the page in **HTML5**.
- Coordinated on **Restful APIs** development and design with partner. Implemented endpoints for **file upload**, and download.

## ACADEMIC PROJECTS

**Hadoop Streaming to analyze Wikipedia Data (Big Data Analytics with MapReduce)**

**Spring 2017**

- Implemented **python** program to process 128GB text dataset using **parallel algorithms** with **Elastic MapReduce** on AWS.
- Developed the data filtering program using the **MapReduce programming model** and used it with **Hadoop Streaming Program**.
- Apply the practice of **defensive programming** to prevent the Hadoop MapReduce job being killed immaturely.

**Pickachu (Ruby on rails with Load Testing)**

**Fall 2015**

- A second-hand trading web application built using **Ruby on Rails** and later deployed to **AWS** and later tested for **scalability**.
- Developed the application in a team of three, and developed the application under **Agile Development Environment**.
- Designed data models in **SQL** for items, users and other basic objects. Use **ActiveRecord** in Rails to create models.
- Used **Tsung** as **Load Testing** Tool and improved response time by **50%**, utilizing memcache, vertical and horizontal scaling in AWS and low-level caching on SQL query.

**eBay Clone Web Application(Java Web Application)**

**Spring 2014**

- Implemented an eBay clone with the functionality of posting an item for sale, **searching**, bidding, and online transaction.
- Developed in a team of two using Java, using **Tomcat** as server. Wrote **Java Servlet** code to handle requests from user.
- Use **SSL encryption** to encrypt online transaction request. Invalidate request if it does not have SSL certificate.
- Designed data models in SQL. Used **Lucene index** and **spatial index** to speed up searching in **MySQL**.

## EXPERIENCE

**WeMash**

**Los Angeles, CA**  
**June – Sept 2015**

**Software Engineering Intern**

- Served as **web engineer** developing under **MEAN stack** environment.
- Built tool which used **bluebird promise** in **Node.js** to parse data from source into MongoDB database **asynchronously**.
- Contributed more than 1000+ lines of code in javascript, and wrote corresponding **tests in mocha** to ensure quality of code.
- Cooperated with other engineers on the main customer-facing product. Successfully delivered beta version during intern.