

# Sheng Ma

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Seeking a full-time software engineer position.

## EDUCATION

**Master of Science: Computer Engineering**

Northwestern University

**Sep 2017 – Dec 2018**

Evanston, IL

## TECHNICAL SKILLS

- Programming Languages: Java, SQL, Go, React, Vue, HTML, CSS
- Programming Tools: Docker, Shell
- Cloud Computing: AWS EC2, Google Cloud, Big Query, Google Dataflow
- Data Storage and Processing: MySQL, ElasticSearch, BigTable
- Other Tools: Git/Github, Apache Tomcat, Design Pattern

## PROJECTS

### Events Search and Ticket Recommendation: *Java Web Service Development*

- Developed an interactive web page for users to search nearby events and purchase tickets based on HTML/CSS/JavaScript/Ajax.
- Utilized **Apache Tomcat** as java servlets container to hold java servlets for **RESTful** APIs to handle HTTP requests and responses.
- Fetched the real events data (price, location, category, etc.) from Ticketmaster API and stored it in relational (**MySQL**) database.
- Implemented business recommendation with **content-based** recommendation algorithm.
- Implemented content-based recommendation algorithm by **MapReduce** to recommend events for users.
- Transferred data from MySQL database to NoSQL database (**MongoDB**) to scale it up.
- Deployed the local server to **AWS(Amazon Web Service) EC2** instance to handle at most 93.7 queries per second without obvious loss of efficiency (tested by **Apache JMeter**).

### NearBy: Geo - Index Based Social Network

- Designed a geo-based social network web application (create/view posts, search, profile etc.) with **React JS**.
- Used **React Router v4** to implement basic token based registration/login/logout flow and implemented server-side user authentication with **JWT**.
- Implemented features such as "Create Post", "Nearby Posts As Gallery" and "Nearby Posts In Map" (**Ant Design, GeoLocation API and Google Map API**.)
- Built a web server (based on **Go**) to handle posting requests and deployed to **Google Cloud(GAE flex)**.
- Utilized **ElasticSearch (GCE)** to design geo-location based search functions for user to get all nearby posts within a certain distance (e.g. 200 km).
- Used **Google Dataflow** to dump posts data (stored in **BigTable**) to BigQuery for offline analysis.
- Implemented a spam-detection function of certain keywords at post level by **BigQuery**.

### React JS based NBA Player Strength Visualization

- Created a dashboard using **React, D3** and **Ant Design** backed by the player data fetched from an API from **stats.nba.com** to visualize individual player's shot data, including a shot chart and user profile view.
- Created 4 extra filters and 2 shot themes(hexbin and scatter) to provide more customized visualization on the shotchart.
- Optimized user experience by developing a autocomplete player search bar providing a list of players (image and name) in the suggestion list.

## WORK EXPERIENCE

**Software Developer Intern**

**IFLYTEK(HTML,CSS,JavaScript(Vue),Git,SVN)**

**Jun– Sep 2018**

**Hefei, Anhui, China**

- Developed Car Interfaces with **Vue.js, H5, CSS, element-ui** to meet the new requirements of UI and UE.
- Applied **axios** to communicate with backend apis to obtain data.
- Used vue-router to show correct view of specific URLs.
- Applied vue modules in programming to make code more clean and easier to read.
- Used **vuex** to establish channels between parent and child components, so as to make communications on data between each components easier and more efficient.