# Xiaojie(Charles) Zha

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## EDUCATIONS

**New York University (NYU)**                                                                                            New York, NY
M.S. in Computer Engineering, GPA 3.5                                                                     *(*Expected) 05/2018
**Beijing University of Posts and Telecommunications (BUPT)**                          Beijing, China
B.S. in Telecommunication Engineering, Queen Mary Univ. of London joint program,  GPA 3.6               06/2016

## SKILLS

- Languages: Java, JavaScript, Python, C/C++, PHP, Linux Shell, HTML, CSS
- Frameworks:  Spring MVC, Node.js, Redis, RabbitMQ, socket.io, React, React Native, Angular.js, TensorFlow, sklearn, Flask, Hadoop, Spark, Lodash, Bootstrap, Jsoup, AWS
- Databases/Tools: MySQL, MongoDB,  DynamoDB, Virtualbox, VMWare, Docker, Nginx, Postman, Git, Heroku

## WORK EXPERIENCE

**Software Engineer Intern at Li Creative Technologies, Inc.**                            06/2017-05/2018
- Designed microservices with **Java** and **python** for company's translator,  dockerized and deployed on AWS ec2
- Obtained official notices from websites using **Jsoup** and preprocessed the data via **TF-IDF**
- Utilized the Java multi-thread service to provide multi-access to translation engine (gained QPS from 1 to 5)
- Built RESTful translation website with **AngularJS**, **NodeJS**, and set proxies using **Nginx** (gained QPS to 20)
- Implemented user authentication(**jwt, bcrypt**) and provide permissions to users of different level (MongoDB)
- Automated the JAR deployment on RHEL7 with bash scripts, and performed server testing using **Jmeter**

**Web Developer Intern at New York Leather House**                                         03/2017-06/2017
- Developed iOS and Android mobile app using **React Native** that supports product browsing and purchasing
- Integrated the Shopping **APIs** with Shopify on **Node.js** and **Express** web service

## PROJECTS

**News Recommendation Web Service (Python, Machine Learning, Docker, React)**       03/2017-05/2017
- Constructed a data pipeline which scrapes and deduplicates latest news using **TF-IDF**, **Redis**, **RabbitMQ**
- Built a single-page web application for users to continuously browse news with **React.js**, **Node.js**, **jwt**, **lodash**
- Designed a training pipeline for news topic modeling to classify online news using **Tensor Flow** DNN
- Implemented a click event log processor that updates news preference model based on user's browsing history

**Real-time fitness location tracking system (Java, Spring, MySQL, Maven)**          11/2017-01/2018
- Implemented REST APIs for fitness simulator, location update service, location distribution service, and location persistence service using **MongoDB**, **MySQL**, **Spring Data**, **Spring Boot** and **Spring Cloud**
- Carried out the back-end services based on Microservices architecture using **Hystrix** and **Spring Boot Actuator**
- Incorporated **RabbitMQ** as message queue to decouple back-end microservices
- **Dockerized** the system infrastructure in a **Vagrant** managed virtual machine

**Code Judgement Web Service for Cooperative Programming (JavaScript, Python, Redis)**    02/2017-05/2017
- Implemented a online code editor which supports multi-user editing using **Socket.io**, **Redis**, Cloud9 **ACE**
- Developed a single-page web application using **Node.js**, **Angular2**, **Auth0** and **MongoDB** for user coding
- Implemented a user-code executor service to compile and run user's code with **Docker** and **Flask**
- Refactored system throughput by decoupling services using RESTful API and set up **Nginx** load balancing

**Music Trends: Big Data Analysis of Contemporary Music (R, Pig Latin, Spark, Spring MVC)**   03/2017-05/2017
- Accessed millions of purchase records using **Hadoop** and plotted genres-related summaries on map with **R**
- Associated product reviews with emotion datasets to conclude characteristics of different genres using **Spark**
- Built an online music player with rating, artist-following, song recommendation modules using **Spring MVC**

**Indoor Mobile Devices Locating and the Data Behind Them (Android, PHP, SQL)**     05/2014-05/2015
- Developed an **Android** app to calculate the position of the user in the mall and show location-corresponded ads
- Implemented triangle centroid location algorithm to locate Android devices indoor using RSSI intensities
- Generated a user location update service, saving location info in **SQLite** every 10 seconds and update on server
- Applied Google Cloud **SQL** as the cloud database and visualized user's walking trace on map using **PHP**

## COURSEWORK

Data Structure & Algorithms, Database Systems, Machine Learning, Big Data Programming, Web Programming, Database Systems, Internet Protocols, Java Programming, 3D Graphic Programming, Software Engineering