Xiaojie(Charles) ZHA

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EDUCATIONS

New York University (NYU)　　　　　　　　　　　　　　　　　　　New York, NY
M.S. in Computer Engineering　　　　　　　　　　　　　　　　　　　　May 2018
Relevant coursework: Data Structure & Algorithms, Data Center and Cloud Computing, Big Data Programming

Beijing University of Posts and Telecommunications (BUPT)　　　　　　Beijing, China
B.E. in Telecommunication Engineering with Management　　　　　　　　　Jun 2016
Relevant courses: C Programming, Web Programming, Database Systems, Data Structure, Internet Protocols

Queen Mary University of London (QMUL)　　　　　　　　　　　　　London, UK
B.S. joint program in Computer and Electrical Engineering　　　　　　　　Jun 2016
Relevant courses: Java Programming, 3D Graphic Programming, Software Engineering

SKILLS

- Programming Languages: Java, JavaScript, Python, C, C++
- Front-end Frameworks: Mongoose.js, Express.js, Angular.js, Node.js, Meteor.js, Bootstrap, Passport.js, Socket.io
- Database Development: MongoDB, MySQL, SQLite, DynamoDB, mLab
- Other: Linux, Ubuntu, CentOS7, RHEL7, AWS EC2, Hadoop, Pig Latin, Spark, Docker, GitHub

EXPERIENCE

Software Developer/Intern at Li Creative Technologies, Inc.　　　　　Jun 2017 – Sep 2017

- Designed web applications for online translation using **MongoDB, Express.js, Angular.js** and **Node.js**
- Applied **Passport.js** as middleware for user authentication and spawn **child process** to call backend python
- Established the backend using **Java websocket** with multiple threads and implemented with **Apache Catalina**
- Initialized a local network node server on **CentOS 7** using **Nginx** for testing products' efficiency and stability
- Deployed system onto AWS EC2 **Ubuntu** and **RHEL7** servers, using **pm2** for monitoring and **python** for testing

PROJECTS

Web Design: A Leetcode-like Code Judgement System　　　　　　　Feb 2017 – May 2017

- Developed a single-page web application using **Node.js, Angular.js** and **MongoDB** for collaborative operation
- Implemented a user-code executor service to build and execute user's' code with **Docker** and Flask
- Refactored system throughput by decoupling services using RESTful API and loading balancing by **Nginx**

Tap News: Real Time News Scraping and Recommendation System　　Mar 2017 – May 2017

- Implemented a data pipeline which monitors and scrapes latest news with **MongoDB, Redis** and **RabbitMQ**
- Built a single-page web application for users to browse news with **React.js and Node.js**
- Built a click event log processor which collects click logs and updates a news preference model for each user
- Designed and built an offline training pipeline for news topic modeling using **Tensorflow, DNN** and **NLP**
- Deployed an online classifying service for news topic modeling using the trained model.

Online Notification System for an Education Platform　　　　　　　Apr 2017 – May 2017

- Designed a message module using **Angular.js** and **Bootstrap.js** for front-end, collaborating with UI designers
- Applied Google **Cloud SQL** as the backend database, insert, update, delete data by calling restAPI from **node.js**
- Kept user data and message data separately for mass messaging, in order to easily modify and delete messages
- Implemented an existing educational website with the message board for both administrative and normal users

Music Trends: Big Data Analysis of Contemporary Music　　　　　　Mar 2017 – May 2017

- Accessed millions of purchase records using **Pig Latin** and plotted genres-related summaries on map with **R**
- Associated product reviews with emotion datasets to conclude characteristics of different genres using **Spark**
- Summarized shopping habits of music lovers using Amazon Review dataset to provide tailored ads using **Scala**

Indoor Mobile Devices Locating and the Data Behind Them　　　　　May 2014 – May 2015

- Applied triangle centroid location **algorithm** to locate **Android** devices indoor using RSSI intensities
- Analyzed users' locations changes on **SQLite** to summarize their common paths and plotted on map using **PHP**
- Generated suggestions for mall arrangement by marking popular areas and best positions for advertisements

3D Modeling and Rendering of Lecturers' Avatars　　　　　　　　　May 2015 – May 2016

- Captured the depth data of lecturer's movement using Kinect Sensor **(C#)**, applied to 3D avatars using **Unity3D**
- Enhanced the detection of movements via actively ignoring trivial movements and providing samples
- Calculated the pointing direction to detect and highlight the main part of the lecturer's current slide