Yuanzhe Li

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EDUCATION

University of California, Irvine — **Irvine, CA**
Master of Science in COMPUTER ENGINEERING — Sep. 2017 - Mar. 2019

Beijing University of Posts and Telecommunications — **Beijing, China**
Bachelor of Science in TELECOMMUNICATIONS ENGINEERING WITH MANAGEMENT — Sep. 2013 - Jul. 2017

SKILLS

Languages:	JAVA, Python, C, C++, SQL, JavaScript, HTML, Assembly language, MATLAB
Tools:	Git, Docker, Django, Qt, MySQL, Eclipse, Trello, Wireshark, Pycharm
Technologies:	Linux, Mac OS, IOT, Distributing System, Machine Learning

EMPLOYMENT

Seiue Education *Software Engineer Intern* *Algorithm Group* Jun. 2018 – Sep. 2018
C++, Qt, Python, Git, MySQL, JavaScript, PHP, simulated annealing algorithm, Markdown

- Led a four members team. Built a Class scheduling system with **C++**, which could divide students into different classes according to their choices and school resources.
- Utilized simulated annealing algorithm to generate an ideal class arrangement result by randomly shuffling class groups and pick better result with higher evaluation points. Class scheduling system helped more than **40 middle schools and high schools** allocate students into classes with limited classroom and teacher resources, according to the new requirements of educational reform.
- Developed a format transforming tool with **Python**, to transform **Excel** file, which contains students' choices and school resources information, into **Json** file as standard input.
- Participated in developing a WeChat Mini Program with **JS**, **PHP** and **MySQL** to help Human Resources Department assign tasks to new employees. Tencent Cloud PHP SDK is used to develop mini program. Tested and Deployed program on Tencent Cloud. Designed MySQL tables, deployed on phpMyAdmin, in order to store employees' information and assignments.
- Implemented an algorithm group inner website with **docsify** framework for algorithm interface and document releasing.

PROJECTS

Weather Prediction System — Mar. 2018 - Jun. 2018

- Implemented one SCALE box with **DHT11** temperature and humidity sensor and **raspberry pi 3B**. Developed physical sensor program with **Python** on Raspbian operation system to collect local raw temperature and humidity data which extends SCALE client class, and send formatted data to broker middleware via **MQTT**. SCALE box could be deployed at anywhere.
- Developed a weather prediction middleware system to predict weather via last 24-hour weather data on broker and send predicted data to SACLE broker which could be shown in SCALE dashboard. Built a prediction mode with **LSTM**. Crawled off one-year weather history data and stored them in AWS database as training data.
- Built **MySQL** database on AWS to store training data in last one year, predicted data and recent data read from SCALE dashboard API.

Search Engine — Jan. 2018 - Mar. 2018

- Developed **Web Crawler** to collect webpages and analyze **URLs** from UCI ICS department website with **Python**.
- Developed **inverted index** for each token word with **TF_IDF** scores, and saved it in **Json** file.
- Implemented search engine **web UI** based on Django framework with **Python, HTML, CSS**.
- Measured performance by **NDCG** evaluation criterial, and improved performance with **PageRank**.

Mini-gallery Web Application — Sep. 2017 - Nov. 2017

- Developed a mini-gallery website based on **Django** web framework and **Python**, where users can search details of gallery, image or artist, and for admin to add, delete or modify data of gallery, image or artist.
- Developed **SQL** queries to extract information from tables in **MySQL** database. Used **MySQL** database to store data of gallery, image or artist and their relation.
- Designed and implemented website with **Bootstrap** web framework with **JS** and **CSS**.

RESEARCH EXPERIENCE

Routing optimization schemes for energy efficiency in Wireless Sensor Networks (WSN), University Politecnica de Valencia — Jan. 2017 - May. 2017

- Simulated combi-frame communications protocol in Wireless Sensor Network with MATLAB.