Zailin Yuan

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EDUCATION

M.S., Computer Science   2019-2020
University of Texas at Dallas, Dallas, TX   GPA: 3.44/4.00

M.S., Chemical Engineering   Dec.2018
University of Southern California (USC), Los Angeles, CA   GPA: 3.28/4.00

SKILLS

- Code with: Java8, C/C++, Python3, JavaScript (with JQuery, with ES6), HTML5, CSS3, R, MATLAB
- Databases & Operating System: MySQL, MongoDB, Unix/Linux System (Apache/Nginx)
- Frameworks: NodeJS (KOA, Express), ReactJS, Spring (with Spring MVC)

PROJECTS & EXPERIENCE

Stock Trading Website   Nov.2019
Group work development of a website for search/buy/sell stocks using ReactJS / NodeJS (KOA)

- Allow user to register, login, log out, add bank accounts and transfer money on the website. Allow User to search and go through more than 100 stocks with pagination. Stocks can be buy / sell one-time or by schedule. Allow users to see stock charts and check stock details by using echart template.
- Developed asynchronous webservice called when users buy and sell stocks by using request queue. OAuth SSO are realized and users can login through GitHub. Communication channels between server, client and web service server are encrypted by TLS.
- Use MySQL as the database for the website.

URL: https://github.com/UTD-Silvermont

Data Analytics and Monitoring on Tennessee Eastman Process   May.2017

- Led a team of four to analysis chemical process data by R.
- PCA, LDA and CCCA are employed in R and MATLAB to modeling on both the quality and process datasets of the Tennessee Eastman Process
- Calculated T^2 and Q limit to detect potential disturbance in distorted data sets
- Introduced LDA method to decide which observation belongs to normal region/abnormal region
- Used CCCA method to monitor the input and output of process with disturbances
- Graphics to show results. Power Point and Oral defense.

Data Analysis and Machine Learning with Python

- Linear Regression / Decision Tree classifier / Naïve Bayes and Logistic regression classifier / SVM classifier / KNN classifier / K-mean clustering.

URL: _https://github.com/ZailinYuan/Machine-Learning.git_

Database Design   Sep.2017
Implement SQLite with JAVA

- The database must be used by command line. It contains functions like insert, query, update, delete with or without selection condition.
- Meta-data are contained in the database file systems.
- The database is based on file system of Bit string I/O. A file system composed of pages of size 512B are realized. All operations (insert, query, update and delete) are based on bit string operation on database files.
- Index file system based on B+ tree is also developed for high performance of query records in database.

Back-End Server   Aug.2019
Develop a server response to multi-requests by clients by concurrency.

- Implemented a Thread Pool with fixed 10 threads to treat customer requests.
- Designed a requests queue of fixed size in singleton mode.
- Realized communication between threads in thread pool by monitor. Thread safety of multi-thread processing are guaranteed.
- Optimized the code so that the multi-thread process gains a better performance.

URL: _https://github.com/ZailinYuan/Thread-Pool.git_

Student Score Management System   Sep.2018

- Implement a hash map to build a student score management system
- Achieved its functions of input, delete, change, sort and search scores of students, and give statistical information on all data stored.
- A user interface is designed to offer User instructions (help list) of all the operations can do.

URL: _https://github.com/ZailinYuan/Student_Score_System.git_

For more my codes: _http://github.com/zailinyu_