

Zailin Yuan

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EDUCATION

M.S., Computer Science	2019-2020
University of Texas at Dallas, Dallas, TX	GPA: 3.50/4.00
M.S., Chemical Engineering	Dec.2018
University of Southern California (USC), Los Angeles, CA	GPA: 3.28/4.00

SKILLS

- Coding with: Java8, C/C++, Python3, JavaScript (with JQuery, ES6), HTML5, CSS3, R
- 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 E-chart 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>

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>

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.

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>

Walking Labyrinth Game Jan.2018

Computer find the path of any maze

- Implemented a program to find maze path instead of human. Load maze from text files.
- Found path from the start location to the exit with DFS and backtracking algorithm.
- Developed an interface with JFrame and JComponent to display maze path.

URL: <https://github.com/ZailinYuan/MazePathSearcher.git>

Student Score Management System Sep.2018

- Implement a hash map to build a student score management system with C++.
- 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