**Zailin Yuan**

GitHub: *http://github.com/zailinyu*•LinkedIn: <https://www.linkedin.com/in/zailinyuan>•Email: [zxy180026@utdallas.edu](mailto:zxy180026@utdallas.edu)•Cell: 213-309-6332

**EDUCATION**

**M.S., Computer Science** 2019-2020

University of Texas at Dallas, Dallas, TXGPA: 3.44/4.00

**M.S., Chemical Engineering** Dec.2018

University of Southern California (USC), Los Angeles, CA GPA: 3.28/4.00

**SKILLS**

* Skills: Java, C/C++, Unix / Linux, Git, MySQL, Html, CSS, JavaScript, jQuery, Python
* Tools: Eclipse IDE, Code Blocks, MATLAB, R, GitHub, MySQL, Notepad++

**PROJECTS & EXPERIENCE**

**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.

**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*](https://github.com/ZailinYuan/MazePathSearcher.git)

**Anagram Dictionary**  May.2018

Scrabble game helper

* Designed a game helper to load dictionary specified by this game and find candidate word for players.
* Designed the user interface letting user to choose which game dictionary to load. Compiled AnagramDictionary,java to loading a dictionary from a .txt file. Using Map container to store the dictionary and find the word. Compiled ScoreTable.java to count the score the user get.

URL: [*https://github.com/ZailinYuan/Word\_Finder\_of\_Scrabble\_Game.git*](https://github.com/ZailinYuan/Word_Finder_of_Scrabble_Game.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*](https://github.com/ZailinYuan/Student_Score_System.git)

**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 T2 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.

**For more my codes:** *http://github.com/zailinyu*