Shangjie (Henry) Zheng

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EDUCATION

Southern Methodist University (SMU) ·············· GPA: 3.94/4.00
Master of Science in Computer Science ·············· Anticipated May 2024
University of Missouri-Kansas City (UMKC) ·············· GPA: 3.52/4.00
Bachelor of Science in Mechanical Engineering ·············· May 2021

SKILLS

- **Portfolio:** https://www.shangjiezheng.com
- **Languages**: Java, Python, JavaScript, HTML/CSS, MATLAB, NoSQL (MongoDB), Relational Database (MySQL)
- **Frameworks and Methodologies**: Django (Python), Express.JS, NLP, Object-Oriented Programming, Database
- **Development Platforms**: MS Visual Studio, VS Code, Eclipse, IntelliJ, PyCharm, WebStorm

PROFESSIONAL EXPERIENCE

Southern Methodist University ·············· *Teaching Assistant* ·············· Feb 2023 – May 2023
- Teaching assistance: assisting professor and students from CS3353, *Fundamentals of Algorithm*, answering questions raised by the students in class, and helping with their study progress.
- Grading: grade each assignment for the class and provide students with feedback.

Fuyao Glass Illinois ·············· *Mechanical Engineer* ·············· Jun 2021 – Jun 2022
- Manufacturing process: Monitor the production statistics data on daily basis; analyze possible causes to equipment downtime and come up with solutions to enhance the equipment performance in the long term.
- Quality Control: Implement methods to inspect, test and evaluate the reliability of manufacturing processes, products, and production equipment.
- CAD design: Perform 3D/2D design of certain machine parts using AutoCAD.
- Engineering Assistance: collect production data (product yield, parts stock etc.), organize and prepare purchasing plans for management reviews.

Fuyao Glass Illinois ·············· *Mechanical Engineer (Internship)* ·············· Summer 2018/2019/2020
- Engineering Training: Studying the fundamentals of equipment adopted on the production line, basics of float glass process engineering; Plant PM process.
- CAD design: Research and Design with Computer-aided tools. Performing 3D/2D design on Auto CAD for projects assigned from maintenance/wareroom/packaging department; submit for review/testing/fabrication.
- Engineering Assistance: Assist communicating among the engineers from China, and local company employee; Preparing data for management reviews.

COMPLETED PROJECTS

Roadside Assistance Application, SMU ·············· Fall 2022
- Developed web application that provides direct driver-technician communication platform.
- Designed and implemented user interface using HTML/CSS, and Express.JS framework.
- Developed middleware set using JavaScript on Express.JS framework to implement post, get and other functions to interact with the user interface and backend database.
- Designed and implemented logics to interact with the MySQL database created for backend of the software system.

Two-Phase Locking System Implementation, SMU ·············· Fall 2022
- Implement the two-phase locking model using Java programming language.
- Create 3 classes with the program, each represents Database, Lock Manager, and Transaction, the program coordinates the progress of each transaction.
- Implement methods for transactions to write/read in the Database object, and the program would using random number strategy to select transaction to proceed and determine whether to grant the transaction request with permission (S-lock or X-lock) or to abort the program when deadlock occurs.

Implementation of CRUD Operations with MongoDB, SMU ·············· Fall 2022
- Implement a NoSQL database with MongoDB dependencies using Java programming language.
- Construct basic database with information of each object input from CSV file.
- Implement the program such that it reads in commands from another CSV file and directly performs CRUD operations to the database in MongoDB.

Design of Quadcopter Control System, UMKC ·············· Fall 2020
- Collect, analyze, and improve measurement data.
- Design and evaluate multi-input, multi-output feedback control system.
- Integrate and utilize measurements with physical hardware and software-based embedded control algorithm to create a PID control system.
- Make the quadcopter perform roll/pitch actions with rate and angle control.

HONORS AND AWARDS

- School of Computing and Engineering Dean's List, UMKC ·············· Spring/Fall 2017, Spring/Fall 2018, Spring 2021
- Dean's International Scholars Awards, UMKC ·············· Jan 2017
- Honor's College, UMKC ·············· Jan 2018