# 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
- **Frameworks & Database**: Django, React, Node.JS, Express.JS, MongoDB, MySQL
- **Methodologies**: Object-Oriented Programming, Database Management, Natural Language Processing
- **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, 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