

Shangyuan Qian

(+1)2136755483 | qsy0710@gmail.com

EDUCATION

Xi'an Jiaotong-liverpool University (<i>Computer Science and Technology</i>)	Sept. 2019 - June 2021
Degree: Bachelor of Engineering with Honours	
University of Liverpool (<i>Computer Science & Electronic Engineering</i>)	Sept. 2021 – June 2023
Degree: Bachelor of Engineering with Honours	
University of Southern California (<i>Computer Engineering</i>)	Jan. 2024 – Dec. 2025
Degree: Master of Science	

SKILLS

- Back-end development, Distributed and Parallel Systems, Database (MySQL), Computer Network, Digital system design, Microprocessor Systems
- Programming: Java, C++, Verilog, Python

WORK EXPERIENCE

Business-intelligence of Oriental Nations Corporation	June 2021 - Sept. 2021
SDE Intern, Development Department	
<ul style="list-style-type: none">➤ Participated in a project to develop a PC application for a client company, working as a team member on the back-end development using Java.➤ The main tasks include:<ul style="list-style-type: none">• Build the back-end architecture of the application using the Spring Framework to implement the main business logic, including user authentication, service request processing and order management module development;• Integrate and optimize database management systems by communicating with databases using JDBC to handle user data storage, request processing, and product information queries;• Implementing RESTful API with Spring Boot for supporting front-end interaction with the server.➤ Eventually completed the development of several functional modules in the back-end, ensuring that the project was delivered on time as well as in compliance with the client company's requirements, and the work I accomplished contributed positively to the team's development efficiency.	

PROJECT EXPERIENCE

RL Based Planning of a Self-Driving Car in CARLA	Sept. 2022 – May 2023
<ul style="list-style-type: none">➤ Applied DQN (Deep Q-Network) reinforcement learning algorithms to train a self-driving car's planner in a simulated urban traffic environment using the CARLA simulator.➤ The project involved training of neural network models such as CNN and Xception, using TensorFlow framework and comparing the data obtained through Tensorboard. Focused on evaluating and refining RL algorithms to improve the vehicle's performance in obstacle avoidance and road following.➤ Eventually the vehicle could continuously learn from the environment to improve its performance, which proved the effectiveness and potential of the DQN algorithm.➤ Github: https://github.com/Komorebi452/Project-RL-Based-Planning-of-a-Self-Driving-Car-in-CARLA	
Digital Transformation of The Local Textile and Garment Industry	Nov. 2021 – Aug. 2022
<ul style="list-style-type: none">➤ Conducted research on the digital transformation of the apparel industry, and identified ways to create an online library to serve the industry in a region. Specialized in back-end development, and implemented the communication forum submodule using Java.➤ Used WebSocket to implement real-time information distribution between users, applied multi-threading and asynchronous processing to improve message handling in highly concurrent situations, and used JDBC to make database integration for optimizing data storage and query performance.	