

Kunyi Yu

Riverside, CA | 951-224-7045 | kyu135@ucr.edu | [@linkedin](#)

EDUCATION

University of California, Riverside (UCR) GPA 3.88 | M.S. in Computer Science Jun 2026

Courses: Algorithms, Machine Learning, Robot Navigation, Large Language Models

Southern University of Science and Technology (SUSTech) B.E. in CSE Jun 2024

Courses: Data Structures and Algorithms, Database Principles, Object-Oriented Design, Software Engineering, Distributed Systems

EXPERIENCE

Graduate Research Assistant | UCR TASL Lab Jul 2025—Present

- Contribute to the development of a vehicle-drone collaborative simulator based on CARLA and SUMO
- Develop LLM-based **Vision-and-Language Navigation (VLN)** algorithms for drones using urban simulation environment built on AirSim, ROS, and OpenFly

Undergraduate Research Assistant | SUSTech GameAI Lab Sep 2022—Jun 2024

- Built a 2D game simulator for police pursuit scenarios to support Multi-Agent **Reinforcement Learning (MARL)**
- Implemented A* and MARL algorithms in **PyTorch**, including MADDPG, IQL, and QMIX

Software Engineer Intern | Mushroom Wealth Technology Sep 2023—Mar 2024

- Developed the Information Center module for a financial **SCRM platform** adopted by major Chinese brokerage firms, supporting **10,000+ financial advisors** in large-scale customer relationship management
- Built **scalable frontend features** including pagination for message feeds, advanced filtering, and search capabilities, optimizing data retrieval for high-volume datasets
- Designed reusable **Vue.js** components to ensure code maintainability and consistent user experience
- Integrated **RESTful APIs** with **Axios** and improved resilience through exception handling and retry strategies under unstable network conditions; participated in **Agile Scrum sprints** (2-week cycles)
- Contributed to **CI/CD** pipelines using **YAML** and **GitHub Actions**, improving deployment efficiency

PROJECTS

Visiting SUSTech: WeChat Mini Program for Campus Access Control *Backend Developer*

- Developed and deployed a **full-stack** WeChat Mini Program serving **10,000+ users** over a **6-month lifecycle**, enabling campus access control through appointment booking and QR code verification
- Architected backend services using **Spring Boot**, **RESTful APIs**, and **PostgreSQL** (Spring Data JDBC), integrating Redis for caching high-frequency queries and secure authentication with **JWT** and **WeChat OAuth**
- Built frontend with WeChat native framework and **Vue.js** (Element Plus UI), and containerized the application with **Docker** for deployment on **Tencent Cloud**

CoinTrack: Web-Based Bill Splitting Platform *Lead Developer*

- Developed and deployed a **full-stack** expense-sharing web app with real-time bill tracking and a custom settlement algorithm to minimize the number of transactions between users
- Architected backend services using **Gin** and **GraphQL APIs** with **PostgreSQL** for transactional integrity, and integrated **OpenAI GPT APIs** to enable OCR-based receipt parsing from uploaded images
- Built a responsive frontend with **React.js** and **TypeScript**, and containerized the application with **Docker** for deployment on **Google Kubernetes Engine (GKE)**, managing the database with **Google Cloud SQL**

SKILLS

Languages	Java, Python, Golang, Swift, C/C++, JavaScript, TypeScript, HTML/CSS
Frameworks	Spring Boot, React.js, Vue.js, Gin, SwiftUI, Kafka, Redis
Databases	PostgreSQL, MySQL
DevOps & Cloud	Kubernetes, Docker, Google Cloud (GKE, Cloud SQL), Git, Linux
APIs & Tools	GraphQL, RESTful APIs, PyTorch, Scikit-Learn, ROS