

ZIHANG HE

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EDUCATION

University of California, San Diego

San Diego, CA

B.S. Computer Science and Engineering (3.93/4.0)

Sept. 2020 - June 2024 (Expected)

Relevant coursework: stochastic processes, optimization, operating system, algorithms, data structures

PUBLICATIONS

- RecWizard: A Toolkit for Conversational Recommendation with Modular, Portable Models and Interactive User Interface: **Co-first** author. Accepted by **AAAI 2024** Demonstration Track.
 - Smart Intersection Dataset for V2X Multi-Agent Multi-Modality Perception: Contributor. Targeting ECCV 2024.
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RESEARCH

UCSD Recommender Systems Lab

San Diego, CA

Research Assistant

Feb. 2023 - Present

- Developed [RecWizard](#), an open-source toolkit for conversational recommender systems, featuring a modular, “text-in, text-out” interface that allows users to easily experiment with new combinations of modules.
- Designed the framework to be LLM-friendly and Hugging Face compatible, enhancing user flexibility.
- Implemented the KGSF recommendation and generation module within the designed framework.

UCSD Safe Autonomous Systems Lab

San Diego, CA

Research Assistant

Sept. 2022 - Present

- Advanced in soft robotics modeling with a focus on rope motion prediction, integrated object-centric embeddings with Koopman operator and graph neural networks, leading to boosted accuracy and efficiency in motion prediction. (manuscript in preparation)
- Generated a diversified dataset using PyBullet and a custom-built 3D physics engine, incorporating variable physical parameters to simulate more realistic soft robot behaviors and motion patterns.

UCLA Mobility Lab

Los Angeles, CA

Research Assistant

May 2023 - Present

- Building the first real-world vehicle-to-everything cooperative perception dataset supporting transmitting neural network features among multi-agent system to boost the perception capability.
 - Contributed to the development of a comprehensive dataset for V2X multi-agent multi-modality perception, focusing on data preparation and validation (Targeting ECCV 2024).
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INTERNSHIPS

Siemens

Beijing, China

Intern

June. 2023 - Sept. 2023

- Contributed to building the AI chatbot for Siemens utilizing the Langchain framework; initiated data collection via web crawling, processed data, and architected the entire codebase. Further refined document retrieval methods by leveraging technical terms, categorizing user queries, and tailoring prompts for optimized responses.
- Independently developed a business forecasting project, using Keras and Optuna for automated hyperparameter selection; implemented 12 advanced models such as multiheadCNN and ConvLSTM. Thoroughly documented and packaged the solution, creating a user-friendly template for both developers and non-developers, and it is used widely by different departments within Siemens.

Tatum Games

Santa Clarita, CA

Web Developer Intern

Jan. 2023 - Apr. 2023

- Worked as a web developer intern to address various tickets in a Jira environment, contributed to the resolution of issues, worked on webapp using JavaScript, PHP, CSS, and user interface features.
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PROJECTS

Smart Schedule Calendar

- Led a team in developing a full-stack web application that provides a local-first scheduling solution. The app allows users to assign tasks to particular time slots or automatically schedule tasks based on various parameters such as deadline, duration, priority, and difficulty.
- Developed the main scheduling algorithm for the application and implemented visualized todo lists using object-oriented data structures. Implemented Puppeteer.js tests for functional application testing.