

Sirui Zeng

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EDUCATION

University of California, Santa Barbara

Ph.D. in Engineering - Computer Science

Santa Barbara, CA

Sept. 2023 - Present

Xidian University *M.S. in Engineering - Computer Science and Technology*

Xi'an, China

Awards: University-level First-Class Scholarship(2021, 2022)

Sept. 2020 - Jul. 2023

Xidian University *B.S. in Engineering - Computer Science and Technology*

Xi'an, China

Awards: University-level First-Class Scholarship(2018); Second-Class Scholarship(2019, 2020) *Sept. 2016 - Jul. 2020*

EXPERIENCE

An Automatic Multi-Agent System Testing Tool

Oct. 2025 – Present

UC Santa Barbara

Graduate Research Assistant

- Description: Built an automated testing pipeline for LLM-based multi-agent systems, reducing reliance on manual test design.
- Enhanced test coverage and diversity by using structured and reformulated definitions for guided test generation.
- Constructed a new evaluation benchmark for multi-agent chatbot testing.

MICA: Open-Source Agentic AI Approach to Chatbots

Oct. 2023 – Jun. 2024

UC Santa Barbara

Graduate Research Assistant

- Description: Independently building a comprehensive open-source chatbot design framework based on LLMs.
- Designed and implemented a complete no-code chatbot development workflow: design, testing, and deployment.
- Designed various LLM interaction mechanisms for protecting the chatbot against common LLM vulnerabilities, ensuring that the chatbot is trustworthy, secure and controllable. <https://github.com/Mica-labs/MICA>

A Chatbot Development Platform Based on the Rasa Framework

Jun. 2022 – Aug. 2023

Intelligent Media Computing Laboratory, Xidian University

- Description: Modified the open-source chatbot framework Rasa to develop an independent chatbot platform.
- Integrated various dialogue types, including FAQs, KBQA, and task-oriented conversations, within one chatbot.
- Updated the training module of the Rasa framework, resolving issues with abnormal memory usage during the original training process.

A Voice-based Assistant for Nucleic Acid Testing Notification

Jan. 2021 – Jun. 2021

Intelligent Media Computing Laboratory, Xidian University

- Description: Developed a system during COVID-19 to automatically notify relevant personnel via phone to participate in nucleic acid testing and answer related questions.
- Developed a robust conversation switching and handling mechanism to effectively manage various situations like time conflicts, location changes, silence, and abusive language.
- Analyzed conversation content to categorize notification results, specifically with fine-grained categorization of failed notifications for easier redialing or use of alternative notification methods.
- After completion and delivery, the system notified hundreds of people per usage, achieving a 65% success rate.

A Refactored Knowledge Base Question Answering System for UnionPay

Feb. 2020 – Sept. 2020

Intelligent Media Computing Laboratory, Xidian University

- Description: Refactored the existing Knowledge base Question Answering system of a chinese company to address increasingly complex customer inquiries.
- Improved an open-source framework's code to enable seamless conversation switching between dialogue contexts without information loss.
- Resolved abnormal response time increases during stress testing by modifying the source code of the dialogue memory tracker module, reducing the response time from a linear rise to a stable 40 QPS.

PAPERS

ADL: A Declarative Language for Agent-Based Chatbots

SOPBench: Evaluating Language Agents at Following Standard Operating Procedures and Constraints

Learning to Lie: Adversarial Attacks Driven by Reinforcement Learning Damage Human-AI Teams and LLMs

SKILLS

Languages: Python, Java, C/C++, Ruby, SQL

Frameworks & Libraries: Django, Flask, Spring Boot, Spring MVC, Spring Data, Hibernate, Ruby on Rails

Developer Tools: Git, Docker, Linux