Xiucheng Zhang (张修程)

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Education Background

Sun Yat-sen University   09/2021 -- 06/2025
- Degree: Bachelor of Engineering; Major: Artificial Intelligence
- Overall GPA: 3.8 / 4

Research Experience

Visiting Intern at the Hong Kong University of Science and Technology,
Computational Cognitive Architecture with Awareness of Real-world Contexts for Affordance-based Task Planning   05/2023 -- 09/2024
Supervisor: Prof. Xiaojuan Ma
- We developed a home assistant agent using a knowledge graph for modeling common sense affordances, enhanced with real-world context. It's based on a computational cognitive architecture and offers high transparency.
- Responsibilities:
  o Being involved in most phases of the project, including idea evaluation, user study design, tool implementation, and paper writing.
  o Specific responsibilities included integrating knowledge graphs with LLMs for planning complex physical tasks, designing baselines for household agents based on VLMs, etc..

Team member, **Health Knowledge Q&A Chatbot based on Community Data**   05/2023 -- 09/2024
Supervisor: Prof. Zhenhui Peng
- We develop a community data-based chatbot to assist disease sufferers or potential patients in learning relevant knowledge.
- Responsibilities:
  o Community data crawling.
  o Building a chatbot based on the RAG architecture for community colorectal cancer data, which serves as the main functional implementation of the research work, will also be used as a free Q&A module in the upcoming mini-program.

Team Leader, **Diagnosing User's Perceived Usability of Mobile Apps Based on Screen Recordings of Users' Operations**   10/2023 -- 04/2024
Supervisor: Prof. Zhenhui Peng
- In this work, we design, develop, and evaluate an interactive tool named *DesignWatch* to help designers analyzing screen recordings collected from usability testings.
- We conduct a data collection experiment and developed a deep learning model to predict the usability scale survey results based on user screen recordings from usability testings.
- Responsibilities:
  o Formation and iteration of project ideas, design and execution of all experiments, tool implementation, and full-text writing of the paper.

Team member, **Low Saturation Confidence Distribution-based Test-Time Adaptation for Cross-Domain Wide-Area Remote Sensing Image Classification**   05/2023 -- 09/2024
Supervisor: Prof. Juepeng Zheng
- We develop the LSCD-TTA model for efficient cross-domain adaptation in remote sensing image classification, enhancing model adaptability without source domain data, achieving up to 12.49% accuracy improvements on benchmark datasets.

- Responsibilities:
  - Implemented the baseline models, conducted analysis of the experimental results, and created figures for the paper.

Professional Experience

NLP Algorithm Engineer Intern, **Shanghai Xijin Information Technology Co., Ltd.**   07/2023 -- 09/2023
- Participated in the development of a knowledge management system supported by a pre-trained large language model.
- Contributed to the preprocessing of documents by automating the conversion of file formats and implementing semantic-based text segmentation, and developed APIs.

Technical Intern, **Shenzhen Realtop Technology Co., Ltd.**   07/2022 -- 09/2022
- Assisted in the development and testing of software for a patented display system with integrated security monitoring functionalities.

Publication

Ziqi Pan, **Xiucheng Zhang**, Zisu Li, Zhenhui Peng, Mingming Fan, and Xiaojuan Ma†. *ACKnowledge: A Computational Framework for Human Compatible Affordance-based Interaction Planning in Real-world Contexts.* (CHI 2025 Under-Review)

Yiwei Yuan, Zhiqing Wang, **Xiucheng Zhang**, Yichao Luo, Shuya Lin, Yang Bai, and Zhenhui Peng†. *CanAnswer: A Community-Powered Conversational Agent for Learning About Colorectal Cancer.* (CHI 2025 Under-Review)

Xiucheng Zhang, Yixin Zeng*, Qichang Li*, Guanyi Chen, Qianyao Xu, Xiaozhu Hu, and Zhenhui Peng† (2024). *DesignWatch: Analyzing Users' Operations of Mobile Apps Based on Screen Recordings.* (MobileHCI 2024 Late-Breaking Work)

Yu Liang, **Xiucheng Zhang**, Juepeng Zheng†, Jianxi Huang, Haohuan Fu. *Low Saturation Confidence Distribution-based Test-Time Adaptation for Cross-Domain Wide-Area Remote Sensing Image Classification.* (International Journal of Applied Earth Observation and Geoinformation, Under Review)

[Patent] Hongxing Zhang, **Xiucheng Zhang** (2023). *Display Screen and System with Security Monitoring Functionality*. Publication No. CN115623170A. January 17, 2023.

Activities

Club President, **School of Artificial Intelligence Youth Media Center**   10/2022 -- 03/2024
- Wrote a script and starred in a campus micro-film themed around 'Carpe Diem', which garnered over ten thousand views across various platforms.
- During the college's robot invitation competition, led the team to several universities, to shoot promotional videos and interview contestants. Specific duties included liaising with and directing.

Skills

Technology
Python | C/C++ | SAS | Matlab

Investigation
User testing | Survey | Semi-structured interview | Thematic analysis

Languages
Mandarin (native) | English (proficient)