

# ZIRUI CHENG

Department of Computer Science and Technology  
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## EDUCATION

### Tsinghua University

B.E. in Computer Science and Technology  
B.A. in Economics and Finance  
GPA: 3.87/4.00

2024 (Expected)

Beijing, China

## INTERESTS

Human-Computer Interaction, Artificial Intelligence, Software Engineering.

## PUBLICATIONS

[C.1] Modeling the Trade-off of Privacy Preservation and Activity Recognition on Low-Resolution Images

Zirui Cheng\*, Yuntao Wang\*, Xin Yi, Yan Kong, Xueyang Wang, Xuhai Xu, Yukang Yan, Chun Yu, Shwetak Patel, Yuanchun Shi.  
CHI 2023 – 2023 ACM CHI Conference on Human Factors in Computing Systems.

## EXPERIENCE

### Carnegie Mellon University

2023

Research Intern at Human-Computer Interaction Institute, Advisor: Kenneth Holstein

Pittsburgh, PA, USA

- Conducted quantitative analysis of a system for community-driven data curation for AI evaluation in online communities.
- Implemented visualization techniques of a dataset that can reflect community consensus in online communities.

### University of California San Diego

2023

Research Intern at Halcioğlu Data Science Institute, Advisor: Haojian Jin

La Jolla, CA, USA

- Developed an interactive system powered by large language models to assist teachers in generating multiple-choice questions based on multiple concepts.
- Proposed the Explore-Validate-Generate interaction pattern to transform an open-ended question into a series of multiple-choice questions.
- Conducted user studies to investigate the feasibility of multiple-choice questions generated from large language models in assessing conceptual learning outcomes.

### SenseTime Technology

2022

Research Intern at Natural Language Processing Group

Beijing, China

- Proposed a large language model – TeacherLM-7.1B with capabilities of explaining the fundamentals, chain of thoughts, and common mistakes for most natural language processing samples.
- Validated the data enhancement capability of the prompts generated from TeacherLM-7.1B through instruction finetuning on various dataset.

### Tsinghua University

2022

Research Intern at Department of Computer Science and Technology, Advisor: Yuntao Wang

Beijing, China

- Proposed a framework for modeling the trade-off between privacy preserving and activity recognition on visual data under different resolutions.
- Investigated the effect of image resolution on both human and machine's performance on activity recognition task and visual privacy awareness through user studies and computer vision experiments.

## HONORS

Social Service Excellence Scholarship, Tsinghua University, 2022

Academic Performance Excellence Scholarship, Tsinghua University, 2021

Comprehensive Excellence Scholarship (top 10%), Tsinghua University, 2020

Freshmen Scholarship (top 10%), Tsinghua University, 2019

## SKILLS

**Programming:** Python, C/C++, JavaScript/CSS/HTML, Java, R, Matlab, Verilog, VHDL.

**Machine Learning:** PyTorch, TensorFlow.

**Software Engineering:** React, Vue, Django.

**Languages:** Chinese, English (TOEFL 103), German.