

Research Statement

My research interest is designing mix-initiative systems to enhance human (lay users and domain experts) capabilities through interacting with AI technologies (NLP, CV, etc.). I approach human-AI interaction by exploring the design of information-based interfaces powered by AI’s knowledge representation capabilities. I hope to contribute to research fields in HCI such as visualization and user interface software and technology through technical and empirical methods.

Education

2020–2024 **B.E. in Computer Science and Technology**, Tongji University, Shanghai, China.
GPA: 4.69/5 (Equivalent to 91.86/100)

Publications

- [P.3]

More Samples or More Prompt Inputs? Exploring Effective In-Context Sampling for LLM Few-Shot Prompt Engineering.

Bingsheng Yao; Guiming Chen; [Ruishi Zou](#); Yuxuan Lu; Jiachen Li; Shao Zhang; Sijia Liu; James Hendler; Dakuo Wang

NAACL 2024 Findings DOI: [10.48550/arXiv.2311.09782](#).
- [P.2]

Chart2Vec: A Universal Embedding of Context-Aware Visualizations.

Qing Chen; Ying Chen; [Ruishi Zou](#); Wei Shuai; Yi Guo; Jiazhe Wang; Nan Cao.

IEEE Transactions on Visualization and Computer Graphics (2024)

GitHub: [idvxlabs/chart2vec](#). Project: [chart2vec.idvxlabs.com](#). DOI: [10.1109/TVCG.2024.3383089](#).
- [P.1]

iTutor: A Generative Tutorial System for Teaching the Elders to Use Smartphone Applications.

[Ruishi Zou](#); Zi Ye; Chen Ye.

ACM UIST 2023 Adjunct (Poster Extended Abstract)

GitHub: [Motion115/iTutor](#). Project: [motion115.github.io/iTutor](#). DOI: [10.1145/3586182.3616663](#).

Professional Experience

- 2023.10 - Present

Research Assistant, Human-Centered AI Lab, **Northeastern University**, Remote

Advisor: [Prof. Dakuo Wang](#)

- In-Context Sampling [P.3]**: Conducted experiments to benchmark the In-Context Sampling (ICS) strategy on various large language models and tasks; Implemented sampling strategy used with ICS.
- 2023.4 - Present

Research Assistant, Student Innovation Center of [CEIE](#), **Tongji University**, Shanghai, China

Advisor: [Prof. Chen Ye](#)

- iTutor: A Generative Tutorial System for Teaching the Elders to Use Smartphone Applications [P.1]**: Proposed a method leveraging large language models that support UI image-to-instruction generation to facilitate elders in using smartphone applications; Coordinated a team of four to participate in the *China Collegiate Computing Contest - HCI Innovation Competition 2023* and was awarded third prize.
- 2023.4 - 2023.10

Research Intern, Computer Music Group, **Carnegie Mellon University**, Remote

Advisor: [Prof. Roger B. Dannenberg](#)

- Music Patterns and Music Models**: Explored using neural networks to perform order selection across various orders of Markov models; Slightly outperformed the best single model benchmark.
- 2022.3 - 2023.9

Research Intern, Intelligent Big Data Visualization Lab, **Tongji University**, Shanghai, China

Advisor: [Prof. Qing Chen](#) and [Prof. Nan Cao](#)

- Chart2Vec: A Universal Embedding of Context-Aware Visualizations [P.2]**: Assisted in the training and evaluation (quantitative and qualitative) of the Chart2Vec model, a context-aware representation learning model for chart specifications that could support various applications such as visualization recommendation.
 - Chart2Vec Production Deployment** (2023.7 - 2023.9, AntV Team, **Ant Group**, Shanghai, China)
- Ruishi Zou | Curriculum Vitæ

Last updated: March, 2024 | 1 of 2

Selected Projects

- [SP.3] **UI2Vec: A Multimodal Embedding Method for Robust UI Classification**
2023.3 - 2023.6
Venue: Multimedia Course Project
Advisor: [Prof. Hanli Wang](#), Tongji University
GitHub: [Motion115/UI2Vec](#). Report: [Technical Report \(Chinese\)](#)
- [SP.2] **Forest Orchestra – Interactive Conducting Game for Music Education**
2022.9 - 2022.12
Venue: *China Collegiate Computing Contest - HCI Innovation Competition 2022*
Advisor: [Prof. Yinan Zhang](#), Tongji University
- [SP.1] **Data-driven Approach on Identifying Systemic Financial Risk**
2022.5 - 2023.3
Venue: Student Innovation Training Program (2022 - 2023 Academic Year)
Advisor: [Prof. Dawei Cheng](#), Tongji University

Awards and Honors

- 2023 **Undergraduate Academic Star** of College of Electronic and Information Engineering, Tongji University, 2023
- 2023 **Third Price**, China Collegiate Computing Contest - HCI Innovation Competition 2023
(top 3%, 16 - 38 out of 1,388 entries) [P.1]
- 2022 **Third-Class Scholarship**, Tongji University Outstanding Student Scholarship, 2021 - 2022 Academic Year
- 2022 **“Award in Creativity”**, China Collegiate Computing Contest - HCI Innovation Competition 2022
(top 4%, 39 - 41 out of 1,170 entries) [SP.2]
- 2021 **First-Class Scholarship**, Tongji University Outstanding Student Scholarship, 2020 - 2021 Academic Year

Skills

English Skills

TOEFL 108/120 (Reading 30, Listening 29, Speaking 24, Writing 25)

GRE 327/340 (Verbal Reasoning 159/170, Quantitative Reasoning 168/170, Analytical Writing 4/6)

Practical Skills

Programming Languages: Python, JavaScript/TypeScript, R, C/C++, LaTeX

Libraries/Platforms (progressively learning): React, d3.js, PyTorch