

### Education

# Tsinghua University, Beijing, China

Sept. 2021 - Present

Undergraduate at Special Pilot Class in Computer Science (Yao class)

• Major: Computer Science and Technology

GPA 3.93/4.00

• Minor: Chinese Language and Literature

GPA 4.00/4.00

#### University of Washington, Seattle, USA

Feb. 2024 - July 2024

Research Visitor at Paul G. Allen School of Computer Science

# Publications & Manuscripts

(\* indicates equal contribution.)

[5] (Manuscript) Ruizhe Shi\*, Runlong Zhou\*, Simon S. Du. "The Crucial Role of Samplers in Online Direct Preference Optimization".[link]

[4] (NeurIPS 2024) Ruizhe Shi, Yifang Chen, Yushi Hu, Alisa Liu, Hannaneh Hajishirzi, Noah A. Smith, Simon S. Du. "Decoding-Time Language Model Alignment with Multiple Objectives".[link]

[3] (ICML 2024) Chenhao Lu, Ruizhe Shi\*, Yuyao Liu\*, Kaizhe Hu, Simon S. Du, Huazhe Xu. "Rethinking Transformers in Solving POMDPs".[link]

[2] (ICLR 2024) Ruizhe Shi\*, Yuyao Liu\*, Yanjie Ze, Simon S. Du, Huazhe Xu. "Unleashing the Power of Pre-trained Language Models for Offline Reinforcement Learning".[link]

[1] (NeurIPS 2023) Yanjie Ze, Yuyao Liu\*, Ruizhe Shi\*, Jiaxin Qin, Zhecheng Yuan, Jiashun Wang, Huazhe Xu. "H-InDex: Visual Reinforcement Learning with Hand-Informed Representations for Dexterous Manipulation". [link]

# Research Experiences

Princeton University (Remote)

Dec. 2024 – Present

Oct. 2024 - Present

Mentored by Dr. Yue Wu

alignment theory

IIIS, Tsinghua University (Beijing, China)

Supervised by Prof. Huazhe Xu

lm self-improvement

CSE, University of Washington (Seattle, USA)

Supervised by Prof. Simon S. Du

Dec. 2023 – Sept. 2024 alignment theory

IIIS, Tsinghua University (Beijing, China)

Supervised by Prof. Huazhe Xu

Mar. 2023 – Jan. 2024 decision-making & transformer

# Awards & Honors

## First-level Comprehensive Scholarship

Nov. 2024

Tsinghua University

 $top\ scholarship$ 

Yao Award (Silver Medal)

Sept. 2024

IIIS, Tsinghua University

top scholarship [link]; 3 students institute-wide

Jiang Nanxiang Scholarship

Nov. 2023

Tsinghua University

top scholarship; 1 student institute-wide

#### China National Endeavor Scholarship

Oct. 2022

Beijing Education Bureau

 ${\it 1\ student\ institute-wide}$ 

# First Prize in National High School's Mathematics Competition of China

Oct. 2020

Chinese Mathematical Society

top 20 province-wide

## Service

### Conference Reviewer

NeurIPS 2024 (Top Reviewer [link]), ICLR 2025, AISTATS 2025

#### Yao Class Seminar Co-organizer

Fall 2024 - Spring 2025

Co-organize weekly research seminars [link]

Tsinghua University

Teaching Assistant

Natural Language Processing

Tsinghua University

Fall 2024

# Voluntary Drop-in Tutoring

Tutor freshmen in basic courses

I have 157 hours of officially recorded volunteering work.

Oct. 2022 - July 2024 Tsinghua University

## Selected Courses

Mathematics and Theory: Calculus (A<sup>+</sup>), Linear Algebra (A), Abstract Algebra (A), Introduction to Complex Analysis (A), Probability and Statistics (A), Basic Topology (93), Introduction to Optimization (A), Theory of Computation (A), Physics of Information (A);

**Programming and AI**: Introduction to Programming in  $C/C++(A^+)$ , Type-safe Modern System Practice (A), Machine Learning (A), Artificial Intelligence: Principles and Techniques (A), Natural Language Processing (A).

#### Technical Skills

Programming Skills: Python, C/C++, LATEX, Bash, Scala, Matlab.

Language Skills: Chinese Mandarin (native), English (TOEFL 104 [R30/L26/S23/W25], GRE 327+3.5 [V157/Q170]).