JINGZHE SHI

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EDUCATION BACKGROUND

Yao Class, IIIS, Tsinghua University Sep. 2021-Present

- Recommended to Yao Class due to extraordinary performance in physics competition
- Cumulative GPA : 3.85/4.0, Specialized GPA: 3.90/4.0

Jacobs School of Engineering, UC San Diego Feb. 2024 - Jun. 2024

- Visiting Scholar, advised by Xiaolong Wang

HONORS AND AWARDS

Technological Innovation Scholarship in 2023 & 2024, Tsinghua Univ. Nov. 2023 & Nov. 2024

- Scholarship awarded to students with innovative research or technological outcome at Tsinghua University.

Excellent Voluntary & Public Service Scholarship in 2024, Tsinghua Univ. Nov. 2024

- Scholarship awarded to students with excellent voluntary or public service experience at Tsinghua University.

First-Class Freshmen Scholarship in 2021, Tsinghua Univ. Nov. 2021

- Top scholarship for freshmen at Tsinghua University.

Gold Medal winner in International Physics Olympiad Jul. 2021

- Gold Medal winner in **IPhO 2021** (the 51st **International Physics Olympiad**), **ranking 10th globally**.

National Team member for Physics Olympiad for China mainland Nov. 2020

- One of the **top 5 students nation wide** selected as National Team member to attend IPhO in domestic Physics Olympiads in China mainland.

PUBLICATIONS AND PREPRINTS

(* for equal contribution)

Scaling Law for Time Series Forecasting Publicly available since May. 2024
Jingzhe Shi*, *Qinwei Ma**, *Huan Ma*, *Lei Li*

- Accepted by **NeurIPS 2024** (main track).
- Openreview: `https://openreview.net/forum?id=Cr2jEHJB9q`.

CHOPS: CHat with custOmer Profile Systems for Customer Service with LLMs Apr. 2024
Jingzhe Shi, *Jialuo Li*, *Qinwei Ma*, *Zaiwen Yang*, *Huan Ma*, *Lei Li*

- Accepted by **COLM 2024** (the 1st Conference on Language Modeling).
- Openreview: `https://openreview.net/forum?id=9Wmdk94oKF`.

Large Trajectory Models are Scalable Motion Predictors and Planners Oct. 2023
Qiao Sun, *Shiduo Zhang*, *Danjiao Ma*, ***Jingzhe Shi***, *Derun Li*, *Simian Luo*, *Yu Wang*, *Ningyi Xu*, *Guangzhi Cao*, *Hang Zhao*

- **preprint**. ArXiv: `https://arxiv.org/abs/2310.19620`.

RESEARCH EXPERIENCE

Understanding Actions in Egocentric Videos Feb. 2024 - Present

- Advised by Professor Xiaolong Wang at UC San Diego.
- In collaboration with Meta.
- Goal1: To collect an egocentric video dataset for actions understanding.

· Goal2: To train Multimodal Language Models to understand actions with egocentric videos.

Scaling Law for Time Series Forecasting Jan. 2024 - May. 2024

· In collaboration with Doctor Lei Li, who is currently a Post-Doc at UW.
· Co-first authored work accepted by **NeurIPS 2024** (the 38th Annual Conference on Neural Information Processing Systems (main track)).
· Proposing Scaling Law for Time Series Forecasting from both theoretical and experimental perspective. Taking into account the impact of look-back context length.
· Showing both theoretically and empirically that long context length may hurt performance in TSF.
· Personal Contribution: Proposing the idea and be responsible for a rough theoretical framework and all the experiments.

Applications of LLMs for Customer Service Sep. 2023 - Feb. 2024

· In collaboration with Doctor Lei Li, who is currently a Post-Doc at UW.
· First authored work accepted by **COLM 2024** (the 1st Conference on Language Modeling, acceptance rate: 28.8%).
· Proposing an agent-based architecture for leveraging large and small LLMs in Customer Service, providing effective performance/cost trade-off.
· Proposing a Dataset with Database, APIs, guiding files and QA pairs for Customer Service collected from CPHOS, a real-scenario of online Physics Olympiad.
· Personal Contribution: Responsible for the idea and main workload for collecting dataset, conducting experiments and designing agent architecture.

Scalable Model for Motion Prediction and Planning in Autonomous Driving Aug. 2023 - Oct. 2023

· Advised by Professor Hang Zhao at Institute for Interdisciplinary Information Sciences, Tsinghua University.
· ArXiv link: `https://arxiv.org/abs/2310.19620`.
· Leveraging successful backbones in NLP for trajectory prediction, demonstrating scalability on diverse datasets and achieving state-of-the-art performance on Nuplan dataset
· Personal Contribution: Responsible for the decoder part. Utilize DDPM to generate trajectory in Key Point Space to capture multi-modal distribution of future trajectories.

SOCIAL WORK EXPERIENCE

CPHOS Dec. 2020 - Present
Co-founder, former tech group leader, council member

· CPHOS (`https://cphos.cn`) is an academical nonprofit organization dedicated to providing Physics Olympiad simulations 4-5 times per year for high school contestants for free through an online platform.
· CPHOS was founded in late 2020 by a group of 10 (including myself), now with 100+ members, mainly from top universities in China. 1000+ students from 200+ high schools participate in most Olympiads held by CPHOS.
· I led the tech group to develope tools supporting online Olympiads, including an LLM-based Replyer for Customer Service (**which developed into the CHOPS research project accepted by COLM later**), etc.

Shanghai Qi Zhi Institute Aug. 2023 - Sep. 2023
Research Intern, Advised by Hang Zhao

· Shanghai Qi Zhi Institute is a Public Institution affiliated to Science and Technology Commission of Shanghai Municipality, led by Andrew Chi-Chih Yao.
· I worked on state transformers for trajectory prediction supported by computational resources at the institute.

SERVICE

Reviewer

· ICLR 2025 reviewer.

IPhO 2022 Marker
Invited online marker for the 52nd International Physics Olympiad (IPhO 2022)

· In 2022 IPhO was held in Switzerland and due to pandemic IPhO had to invite extra markers.
· I was invited and fulfilled my job as an online marker to mark, discuss with my marker partner and to do rebuttals with team leaders from countries and regions all around the world through online meetings.

SKILLS AND OTHERS

Languages: Chinese (native); English (TOEFL: 106); Japanese (daily dialogue).

Programming languages: Python, C/C++, etc.

Tools: Git, LaTeX, SQL, etc.