

JIZHOU GUO

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Research Interests: Large Language Models, Natural Language Processing.

EDUCATION

Shanghai Jiao Tong University • Shanghai, China Aug 2022 – Present
Bachelor of Science • Zhiyuan College (**Honor, Top 10%**) • Mathematics and Applied Mathematics • GPA: 3.8
Selected Courses: Topic Course (Deep Learning) (A+, 100), Topic Course (Applied Mathematics) (A+, 100), Data Structure (Honor) (A+), Introduction to Computer Science (A+), Numerical Methods for ODE & PDEs (A+), Differential Geometry (A+), Introduction to Physics (Honor) (A+), Problem-solving and Practice (A+), Foundations of Data Science (A), Mathematical Analysis (Honor) (A), Ordinary Differential Equations (A), Partial Differential Equations (A), etc.

PUBLICATIONS

** denotes equal contribution*

Reward Inside the Model: A Lightweight Hidden-State Reward Model for LLM's Best-of-N sampling

Jizhou Guo, Zhaomin Wu, Philip S. Yu

Under review [\[arXiv\]](#)

Model-based Large Language Model Customization as Service

Zhaomin Wu*, Jizhou Guo*, Junyi Hou, Bingsheng He, Lixin Fan, Qiang Yang

DIG-BUGS @ ICML 2025 Under review at main conference [\[arXiv\]](#)

Calibrating Reasoning in Language Models with Internal Consistency

Zhihui Xie, Jizhou Guo, Tong Yu, Shuai Li

NeurIPS 2024 [\[arXiv\]](#) [\[poster\]](#) [\[code\]](#)

Cross-Stimulus Transfer Learning: Enhancing Emotion Recognition from Visual-Auditory to Olfactory Perception

Jiaqi Wang*, Zhengting Chen*, Keyan Huang, Yifan Wu, Dian Zhang, Jizhou Guo, Xinglan Liu, Dan Peng, Baoliang Lu, Weilong Zheng

EMBC 2025 (Full Contributed paper)

EEG-based Emotion Recognition in an Olfactory Stimulation Paradigm

Jiaqi Wang*, Zhengting Chen*, Keyan Huang, Yifan Wu, Dian Zhang, Jizhou Guo, Xinglan Liu, Dan Peng, Baoliang Lu, Weilong Zheng

Under review

RESEARCH EXPERIENCE

BDSC Lab - University of Illinois Chicago

Jun 2025 – Aug 2025

Advisor: [Prof. Philip S. Yu](#)

- Developed a highly parameter-efficient reward model leveraging the LLM hidden states, which systematically outperforms baselines with less than 0.005% of the parameters of baselines.

Xtra Group - National University of Singapore

Jun 2024 – Aug 2024

Advisor: [Prof. Bingsheng He](#)

- Proposed a novel framework that facilitates LLM customization as a service for domain-specific applications. It achieved substantial performance improvements in domain-specific tasks, boosting accuracy by up to 26% while preserving privacy.

John Hopcroft Center for Computer Science - Shanghai Jiao Tong University

Oct 2023 – May 2024

Advisor: [Prof. Shuai Li](#) and [Dr. Tong Yu](#)

- Worked on training-free LLM calibration approach by leveraging hidden states.

Zhiyuan Innovative Research Center - Shanghai Jiao Tong University

Dec 2022 - Jan 2024

Advisor: [Prof. Bao-Liang Lu](#) and [Prof. Wei-Long Zheng](#) [\[Certificate of Completion\]](#)

- Implemented a Transformer-based Domain-Adversarial Neural Network (DANN) to transfer knowledge from visual to olfactory EEG data for emotion classification.
- Collected data and applied machine learning techniques to predict human emotions from EEG signals in response to various olfactory stimuli.

Quantitative Biology Summer School - Center for Life Sciences, Peking University

Jul 2023

- Chosen from 50 candidates nationwide.

Tencent Spark Project - Tencent Corporation

Aug 2022

- Chosen from 50 high-school students with talents nationwide.
- Engineered a robust palm liveness detection system and successfully blocking palm images displayed on screens.

SELECTED PROJECTS

Deep Reinforcement Learning: Insights from AlphaGo Team leader, advised by Prof. Dan Hu (Scored 100)	Spring 2024
Spectral vs. Fourier Neural Operators in Parametric PDE Modeling: Analysis and Experiments Individual project, advised by Prof. Lei Zhang (Scored 100)	Spring 2025
Vertical Federated Learning Challenge Individual project, advised by Prof. Bingsheng He [code]	Spring 2024
Frequency principle in deep learning Individual project, advised by Prof. Zhi-Qin John Xu	Autumn 2023
Two-Area RNN: Representations for Context-Dependent Decisions Team leader, advised by Prof. Douglas Zhou [PDF] [code]	Fall 2024
Fresnel Integral & Van der Waals equation Team project, advised by Prof. Zhenli Xu	Spring 2023

SELECTED AWARDS

Click [here](#) to view all certificates

Contest Prizes

- **Gold Award** and **First Runner-up** in the National College Students' Career Planning Contest (Shanghai), Jan 2025
- Third Prize in Mathematics competition of Chinese College Students (Shanghai), Dec 2023
- **First Prize** in Shanghai Collegiate Programming Contest, Sep 2023 (Ranked 2nd in Shanghai)
- **Gold Medal** in Astar Programming Contest (Shanghai region), Aug 2023 (Ranked 2nd in Shanghai)
- **Gold Medal** in 2023 China Collegiate Programming Contest (**CCPC**) National Invitational Contest (Hunan), May 2023
- **Gold Medal** in 2023 International Collegiate Programming Contest (**ICPC**) Xi'an Invitational Contest, May 2023
- **Gold Medal** in 2022 International Collegiate Programming Contest (**ICPC**) Asia Hangzhou Regional Contest, Dec 2022 (Ranked 8th nationwide)
- **Gold Medal** in 2022 China Collegiate Programming Contest (**CCPC**) (Shanghai region), Sep 2022
- **Silver Medal** in National Olympiad in Informatics (**NOI**), Jul 2021
- **Ranked 22nd nationwide** in National Olympiad in Informatics (**NOI**) Online Senior Group, Mar 2021

Honors

- Zhiyuan **First-Class** Overseas Research Scholarship
- Merit Student of SJTU
- Second-Class Academic Scholarship, SJTU (Top 10%, ranked 2nd overall)
- Zhiyuan Honors Scholarship (three times)

SERVICES

Invited as reviewer: [EMBC 2025](#), [AI4MATH @ ICML 2025](#)

SKILLS

- Programming languages: Python, C/C++, Matlab, GNU Bash, \LaTeX .
- Language: Chinese (Native Speaker), English (Proficient, TOEFL 105, CET6 648).
- Expertise & Hobbies: Piano (Amateur Level 10), Singing (Amateur Level 9), Music Theory (Amateur Level 5).