## **Benhao Huang**

<u>huskydogewoof@gmail.com</u> <u>https://huskydoge.github.io/ | Google Scholar</u>

#### **EDUCATION**

School of Electronics Information and Electrical Engineering, Shanghai Jiao Tong University Sep 2021 – Current B.ENG. in Computer Science and Technology (IEEE Honor Class), GPA: 93.14/100.00, 4.08/4.30, (Rank 5/127)

- Computer Science: Design and Analysis of Algorithms (A+), Computer Networks (A+), Operating System (A+), Programming Languages and Compilers (A+), Natural Language Processing (A+), Database System Technology (A+), Computer Vision (A+), Principles and Methods of Program Design (A+), Program Design Practice (A+), Introduction to Data Science (A+)
- Mathematics: Mathematical Analysis (A+), Linear and Convex Optimization (A+), Information Theory (A+), Complex Analysis (A+), Probability and Statistics (A+)
- Additional Academic Pursuit: Engaged in a dual degree program in Mathematics and Applied Mathematics. Coursework includes: Complex Analysis, Abstract Algebra, Linear Algebra II

TOEFL: 107, S24, R27, L29, W27, GRE: V157, Q170, AW4.0

#### RESEARCH INTEREST

- Interpretability AI, Data Influence Analysis
- LLM Agent, World Model, LLM Reasoning and Planning
- LLM Alignment, Long Context Modeling

### **PUBLICATIONS**

- DCA-Bench: A Benchmark for Dataset Curation Agents [paper]
  Benhao Huang, Yingzhuo Yu, Jin Huang, Xingjian Zhang, Jiaqi Ma. (In Submission)
- Seeing is not always believing: The Space of Harmless Perturbations [paper]
  Lu Chen, Shaofeng Li, Benhao Huang, Fan Yang, Zheng Li, Jie Li, Yuan Luo. (In Submission)
- Defining and Extracting Generalizable Interaction Primitives from DNNs. [paper | code] Lu Chen, Siyu Lou, *Benhao Huang*, Quanshi Zhang. **ICLR 2024.**

#### SELECTED PROJECTS

# Pandora: Towards General World Model with Natural Language Actions and Video States

Work in Process (co-leading) Advisor: Prof. Zhiting Hu

Jun 2024 - Present

#### DCA-Bench: A Benchmark for Dataset Curation Agents

ICLR 2025 Under Review (1st author) Advisor: Prof. Jiaqi Ma [paper]

Jan 2023 – Present

- Identified a novel task for LLM agents detecting dataset quality issues for the purpose of automating AI training data curation and developed the first benchmark for this task.
- Developed an LLM-based automatic evaluator, which is shown to be reliable and robust to self-preference or length bias through experiments.
- Led the project, including surveying, code implementing, experiments and writings.

#### **Defining and Extracting Generalizable Interaction Primitives from DNNs**

ICLR 2024 Advisor: Prof. Quanshi Zhang [paper | code]

Sep 2023 – Jan 2024

- Given different DNNs trained for the same task, ideated a method to extract their shared interactions.
- By conducting contrast experiments, we showed that the extracted interactions can better reflect common knowledge shared by different DNNs.
- Implemented the main experiment codes and engaged in algorithm design, deployed the GitHub repository.

## RESEARCH EXPERIENCES

• Research Intern, MAITRIX Lab, University of California San Diego.

Apr 2024 - Present

Worked on World Model video generation, benchmark development, and LLM reasoning. Advisor: Prof. Zhiting Hu

• Research Intern, Alignment Team, Moonshot AI

Mar 2024 - Jun 2024

Explored prompt priorities alignment of LLM Advisor: Flood Sung, Yanan Zheng

• Research Intern, TRAIS Lab, University of Illinois Urbana-Champaign	Nov 2023 – Present
Constructed a LLM Agent benchmark for dataset issues detection Advisor: Prof. <u>Jiaqi Ma</u>	
• Research Intern, XAI Lab, Shanghai Jiao Tong University	Apr 2023 – Jan 2024
Worked on extracting common knowledge of different LLMs Advisor: Prof. Quanshi Zhang	
AWARDS	
National Scholarship (Top 0.2% nationwide)	2023 - 2024
• Rui Yuan-Hong Shan scholarship (Top 2%), SJTU	2022 - 2023
• Shao Qiu scholarship (Top 4%), SJTU	2021 - 2022
• Meritorious Winner of Mathematical Contest In Modeling (2022)	
OTHERS	
• Student Mentor of CS2612 Programming Languages and Compilers	2023 - 2024
• Student Mentor of CS2601 Convex Optimization	2023 - 2024
Volunteer of Shanghai Marathon	2022 - 2024
• Member of the Outreach Department, SJTU Spark Program Student Associations	2021 - 2022