

# Jingyang Gong

MASTER'S STUDENT · COMPUTER ENGINEERING

New York, USA / Shanghai, China

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## Education

### New York University

New York, USA

MSC IN COMPUTER ENGINEERING GPA: 3.89/4.0

September 2023 - Present

- Computer System Architecture, Advanced Machine Learning, Stochastic Process, Embedded Systems, Computational Cognitive Modeling, etc.

### East China Normal University

Shanghai, China

BENG IN DATA SCIENCE GPA: 3.75/4.0

September 2019 - June 2023

- Computer System, Data Science, Machine Learning, Distributed Systems, Database, etc.
- Thesis: *Generating Entity Description Using Graph Neural Network and Beyond* (Best Undergraduate Thesis Award)

### East China Normal University

Shanghai, China

BSC MINOR IN APPLIED PSYCHOLOGY GPA: 3.7/4.0

September 2021 - June 2023

- Personality Psychology, Experimental Psychology, Social Psychology, Counselling Psychology, Industrial and Organizational Psychology etc.

## Research Experience

### NLP Group, Shanghai AI Laboratory

Shanghai, China

ROLE: RESEARCH INTERN

March 2024 - Present

- Working on establishing benchmarks for concept extrapolation ability in large language models
- Working on augmenting spatial awareness of multi-modal foundation models

### International Algorithm Case Competition

Greater Bay Area, China

ROLE: TEAM LEADER

August 2023 - December 2023

- Proposed a two-stage prompt learning strategy for better cross-modal alignment in CLIP model
- Balanced multiple noise reduction strategies to improve multi-label classification ability of image-text models

### International Algorithm Case Competition

Greater Bay Area, China

ROLE: TEAM MEMBER

August 2022 - December 2022

- Proposed a gradient-free black-box tuning algorithm for large language models
- Design and conduct a series of experiments to investigate the influence of each strategy

### R&D Connectivity and Autonomous Driving Software Department, Mercedes-Benz

Shanghai, China

ADVISOR: DR. BAOFENG WANG (TECH LEAD & PRINCIPAL ENGINEER)

June 2022 - August 2022

- Conducted research on Visual-based Spatial Perception & Parking Lot Detection
- Established criteria for close-loop simulation of Autonomous Driving systems

### School of Data Science and Engineering, East China Normal University

Shanghai, China

ADVISOR: DR. LV NI

March 2022 - December 2022

- Alignment of Time Series and Image Signal
- Anomaly Detection in Time Series

## Honors and Awards

2023	Int'l Algorithm Case Competition: Image-Text Modeling, 3rd Prize, Hongkong Greater Bay Area	\$5500
2022	Int'l Algorithm Case Competition: LLM Tuning, 2nd Prize, Hongkong Greater Bay Area	\$14000
	ECNU Outstanding Graduates, East China Normal University	
	Excellent Bachelor Thesis Award, East China Normal University	

2021	<b>Outstanding Student</b> , East China Normal University <b>Second Class Scholarship</b> , East China Normal University <b>Meritorious Winner</b> , Mathematical and Interdisciplinary Contest in Modeling	\$500
2020	<b>Second Class Scholarship</b> , East China Normal University <b>Second Prize</b> , ECNU Mathematics Competition	\$500

## Publications

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[1] Qiushi Sun, Chengcheng Han, Nuo Chen, Renyu Zhu, **Jingyang Gong**, Xiang Li and Ming Gao. *Make Prompt-based Black-Box Tuning Colorful: Boosting Model Generalization from Three Orthogonal Perspectives*. LREC-COLING 2024. [\[Paper\]](#)

## Teaching Experience

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Fall 2022 **Teaching Assistant**, Statistics & Machine Learning  
Instructed by **Dr. Lv Ni** and **Prof. Qiwen Dong**, School of Data Science and Engineering,  
ECNU

## Professional Development & Skills

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### SKILLS

**Languages:** Mandarin (Native), English (Fluent, IELTS-7.0, TOEFL-104, GRE-324)

**Programming/Frameworks/Skills:** Python, C/C++, PyTorch, SQL,  $\text{\LaTeX}$ , Flask, Huggingface, Technical Writing

### RESEARCH INTEREST

My research interests lies in the intersection of vision and language modelling, with my current focus on:

- Interpretability of Multi-modal models.
- Cognitive Modeling of LLM.
- Energy-based Self-supervised Learning.
- Autonomous Driving.