# Luca Zhou

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### **Education**

Sapienza University of Rome & CUHK Shenzhen (Exchange)

2023 - 2025

MSc in Computer Science: AI-centered track

GPA: 4.0/4.0

University of Rome Tor Vergata

2020 - 2023

BSc in Computer Science Final Grade: 110 Summa Cum Laude

#### Skills

Programming Languages & Tools: Python, PyTorch, Weights & Biases, Git, C/C++, Java, SQL Languages: Mandarin Chinese (Native), Italian (Native), English (Advanced)

### Research

### ATM: Enhancing Model Merging through Alternating Tuning and Merging

Sapienza University of Rome

Jun. 2024 - Present

- First-author paper (preprint available)
- Investigated the relationship between task vectors and multi-task gradients
- Developed an iterative model merging framework, improving task generalization

#### LLM-based Explanations for Mitigating the Clever Hans Effect

University of Rome Tor Vergata

Feb. 2023 - Jun. 2023

- Designed an explainable AI pipeline to detect and mitigate spurious correlations in datasets
- Fine-tuned BERT on refined datasets, achieving a 40% accuracy improvement over baseline models

### Experience

#### Visiting Graduate Student Researcher

Department of Computer Science and Engineering, UCSD

Mar. 2025 - May 2025

- Conducting research on Time Series Captioning with LLMs under the supervision of Prof. Rose Yu
- Remote work started in Jan. 2025

### Graduate Student Researcher

GLADIA, Sapienza University of Rome

Jun. 2024 - Feb. 2025

- Investigated novel approaches for model merging and task arithmetic

### Workshop Reviewer

UniReps, NeurIPS 2024

Oct. 2024

#### Research Intern

Reveal SRL, Rome

Aug. 2023 – Dec. 2023

- Led a predictive analytics project in collaboration with the Italian Union of Chambers of Tourism
- Implemented and optimized the Informer transformer model to forecast Italian national tourism trends

### **Projects**

### Finger Photo Recognition System

 $Sapienza\ University\ of\ Rome$ 

Jan. 2023

- Developed a biometric recognition system leveraging finger-photo analysis
- Integrated transfer learning and contrastive learning for enhanced feature representation
- Achieved a perfect recognition rate (1.0) on the IIITD Fingerphoto dataset

#### Awards

## Iliadship Scholarship & Mentorship

2023

- Selected as one of 10 recipients nationwide for a prestigious merit-based scholarship and mentorship program by Iliad

### **Extracurricular Activities**

#### Board of European Students of Technology (BEST)

Fundraising Coordinator & Internal Relationships

Feb. 2021 - Jul. 2023