

# 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*

## Publications

**Zhou, L.**, Solombrino, D., Crisostomi, D., Bucarelli, M. S., Silvestri, F., & Rodolà, E. (2024). Atm: Improving model merging by alternating tuning and merging. arXiv preprint arXiv:2411.03055.

## Skills

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

## Experience

### Visiting Graduate Student Researcher

*Department of Computer Science and Engineering, UC San Diego* Mar. 2025 – May 2025  
- Led a research project on benchmarking VLMs for time series captioning and understanding, collaborating with *Rose STL Lab*, advised by 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

### Machine Learning 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

### Transfer Learning of Mathematical Skills in Small LLMs

*The Chinese University of Hong Kong (Shenzhen)* Dec. 2024  
- Investigated positive transfer learning among mathematical skills in small LLMs

### A Survey of NLI Downstream Tasks and Universality

*Sapienza University of Rome* Jun. 2024  
- A comprehensive investigation of NLI's downstream applications, with additional benchmarks

### A Contrastive Learning Framework for Closed-Set Finger Photo Identification

*Sapienza University of Rome* Jan. 2024  
- Developed a biometric recognition system for recognizing subjects based on finger-photos

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

*University of Rome Tor Vergata* Feb. 2023 – Jul. 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 the baseline model

## Awards

### Iliadship Scholarship & Mentorship

2023  
- One of 10 yearly recipients nationwide for a merit-based scholarship and mentorship program by Iliad

## Extracurricular Activities

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

*Fundraising Coordinator & Internal Relationships*

*Feb. 2021 – Jul. 2023*