Chengzu Li

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RESEARCH FOCUS

Natural Language Processing, Reasoning, Multimodality, Spatial Reasoning, Natural Language Grounding

EDUCATION

Language Technology Lab, University of Cambridge

 $Cambridge,\ UK$

Ph.D. in Computation, Cognition and Language

2023 - current

- Supervised by Dr. Ivan Vulić and Prof. Serge Belongie, fully funded by Cambridge Trust.
- Visiting student at Belongie Lab (2025.8 2025.11)

University of Cambridge

Cambridge, UK

M.Phil. in Advanced Computer Science; Graduated with Distinction (81.7/100)

2022 - 2023

- Supervised by Prof. Simone Teufel, fully funded by Cambridge Trust.
- M.Phil. thesis: Generating Instructions for Grounded Robot Navigation (Distinction)

Xi'an Jiaotong University

Xi'an, China

B.Eng. in Automation, minor in Fintech; GPA: 91.96/100 (top 5%)

2018 - 2022

University of Hong Kong

Hong Kong

Exchange student in Computer Engineering; GPA: 4.08/4.3 Student Research Assistant in Dept. of Computer Science Jan. 2021 - Jun. 2021 Jul. 2021 - Sept. 2021

PUBLICATIONS & PRE-PRINTS

Reinforcement Learning for Better Verbalized Confidence in Long-Form Generation

arXiv

Caiqi Zhang*, Xiaochen Zhu*, Chengzu Li, Nigel Collier, Andreas Vlachos

Visual Planning: Let's Think Only with Images

arXiv

Yi Xu*, Chengzu Li*, Han Zhou*, Xingchen Wan, Caiqi Zhang, Anna Korhonen, Ivan Vulić

- Non-archival at Foundation Models Meet Embodied Agents@CVPR 2025; Present at CHIA 2025
- Featured at JiQiZhiXin(Chinese), LiangZiWei(Chinese)

Scaling and Beyond: Advancing Spatial Reasoning in MLLMs Requires New Recipes

arXiv

Huanyu Zhang*, <u>Chengzu Li*</u>, Wenshan Wu, Shaoguang Mao, Yifan Zhang, Haochen Tian, Ivan Vulić, Zhang Zhang, Liang Wang, Tieniu Tan, Furu Wei

Large Language Models are Miscalibrated In-Context Learners

ACL 2025 Findings

Chengzu Li, Han Zhou, Goran Glavaš, Anna Korhonen, Ivan Vulić

- Oral Presentation at BMVA Workshop, Non-archival at ICLR 2024 Workshop on R2FM

Imagine While Reasoning in Space: Multimodal Visualization-of-Thought

ICML 2025

Chengzu Li*, Wenshan Wu*, Huanyu Zhang, Yan Xia, Shaoguang Mao, Li Dong, Ivan Vulić, Furu Wei

- Featured at IEEE Spectrum, TWIML AI Podcast, XinZhiYuan(Chinese)
- Present at CHIA 2025.

TopViewRS: Vision-Language Models as Top-View Spatial Reasoners

EMNLP 2024 Oral

Chengzu Li*, Caiqi Zhang*, Han Zhou, Nigel Collier, Anna Korhonen, Ivan Vulić

- Non-archival at ACL 2023 SpLU Robo Workshop (Oral), ECCV 2024 Eval-Fomo Workshop

Semantic Map-based Generation of Navigation Instructions

COLING 2024

Chengzu Li, Chao Zhang, Simone Teufel, Rama Sanand Doddipatla, Svetlana Stoyanchev

Generating Data for Symbolic Language with Large Language Models

EMNLP 2023 Main

Jiacheng Ye, Chengzu Li, Lingpeng Kong, Tao Yu

Binding Language Models in Symbolic Languages

ICLR 2023 Spotlight

Zhoujun Cheng*, Tianbao Xie*, Peng Shi, <u>Chengzu Li</u>, Rahul Nadkarni, Yushi Hu, Caiming Xiong, Dragomir Radev, Mari Ostendorf, Luke Zettlemoyer, Noah A. Smith, Tao Yu

UnifiedSKG: Unifying and Multi-Tasking Structured Knowledge Grounding with Text-to-Text Language Models

EMNLP 2022 Oral

Tianbao Xie*, Chen Henry Wu*, Peng Shi, Ruiqi Zhong, Torsten Scholak, Michihiro Yasunaga, Chien-Sheng Wu, Ming Zhong, Pengcheng Yin, Sida I. Wang, Victor Zhong, Bailin Wang, Chengzu Li, Connor Boyle, Ansong Ni, Ziyu Yao, Dragomir Radev, Caiming Xiong, Lingpeng Kong, Rui Zhang, Noah A. Smith, Luke Zettlemoyer, Tao Yu

(*: equal contribution)

PROFESSIONAL EXPERIENCES

GenAI Group, Microsoft Research

Research Intern, working with Wenshan Wu on multimodal spatial reasoning.

Jun. 2024 - Jan. 2025

Toshiba Cambridge Research Laboratory

Research Intern, working with Svetlana Stoyanchev, Chao Zhang, Rama Doddipatla Jan. 2023 - Jul. 2023

Shanghai Artificial Intelligence Laboratory

Research Intern, NLP Group, with Dr. Lingpeng Kong

Oct. 2021 - Jan. 2022

University of Hong Kong (2021 HKU CS Research Internship Programme)

Research Intern, NLP Group, with Dr. Lingpeng Kong and Dr. Tao Yu

Jul. 2021 - Oct. 2021

TEACHING EXPERIENCES

Teaching Assistant

Department of Theoretical and Applied Linguistics, University of Cambridge

Li18 Computational Linguistics (Practical Session)

2023

Li18 Computational Linguities (Practical Session)

2024

SELECTED AWARDS & GRANTS

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2025	Postgraduate	Research	Fund from	. Jesus Cc	illege Caml	bridge

- 2025 Lambda Research Grant (\$2000 USD in GPU credits)
- 2024 Postgraduate Research Fund from Jesus College, Cambridge
- 2024 Scholar of Jesus College, Cambridge (for outstanding academic performance)
- 2023 PhD Scholarship from Cambridge Trust (Fully-Funded)
- 2022 Masters Scholarship from Cambridge Trust (Fully-Funded)
- 2019 National Scholarship (Top 1%, highest honor for undergraduates in China)
- **2019** Excellent Student (Top 10% among 5000+ students)

MEDIA COVERAGE & PRESENTATIONS

- 2025 Invited Talk at HKUST (GZ): Reason with Multimodal Minds in Space
- 2025 LiangZiWei (Chinese): Imagined Visuals Alone Boost Large Model Reasoning Accuracy by 80%
- 2025 JiQiZhiXin (Chinese): Thinking with Images Alone: RL Fosters a New Paradigm for Reasoning Models
- 2025 XinZhiYuan (Chinese): Beyond CoT! Directly Visualize the Multimodal Reasoning Process
- 2025 TWIML AI Podcast with Sam Charrington: Multimodal Visualization-of-Thought
- 2025 IEEE Spectrum, "Thinking" Visually Boosts AI Problem Solving
- 2024 BMVA: Trustworthy Multimodal Learning with Foundation Models