# Zijun Long

## Summary

My research primarily focuses on artificial intelligence (AI) for the development of novel multi-modal (text+image) learning techniques, with a particular emphasis on the research of large language models at the intersection of machine learning, computer vision, and natural language processing. My research track record is distinguished by 11 peer-reviewed full papers as first-author, published in prestigious conferences and journals, such as ECCV (h5-index 238, CORE A\*), SIGIR (h5-index 103, CORE A\*), ICRA (h5-index 122, CORE A\*), ICASSP (h5-index 129). Significantly, I have shown a substantial increase in the number of citations, which has quadrupled compared to what I had in 2022. I am proficient in programming, including Python, C++. I possess extensive experience in large-scale data analysis and am proficient in numerous deep learning and data analysis frameworks, including scikit-learn, PyTorch, and Bayesian methods.

## **EDUCATION**

University of Glasgow, Glasgow, United Kingdom

PhD in Computer Science, Supervisor: Richard Mccreadie, Gerardo Aragon Camarasa

Fully Funded

2020 — Now

2019 - 2020

University of Glasgow, Glasgow, United Kingdom

M.S.c in Data Science, Average grade: A3

Awarded with Distinction

South China University of Technology, GuangZhou, China

B.S. in Software Engineering

2015 - 2019First Honour Degree

#### ACADEMIC EMPLOYMENT EXPERIENCE

University of Glasgow

MSc Project Supervisor

Glasgow, United Kingdom

May 2023 — Oct 2023

• Supervised 20 MSc students and 8 of them achieve A grade for their projects.

University of Glasgow

Tutor

Glasgow, United Kingdom Nov 2020 — Present

- Courses: Recommendation system, Text as Data, Introduction of Data Science, Programming, Machine Learning, etc.
- Received high commendation for my exceptional performance in the role.

## University of Glasgow

Marking Assistant

Glasgow, United Kingdom Nov 2020 — Present

- Marking the exams for many courses including Text as Data, Introduction of Data Science, Programming, Machine Learning, etc.
- Lecturer's assessment: Accomplished the task with exceptional proficiency, consistently maintaining high standards across all assignments.

### **PUBLICATIONS**

# Peer-reviewed Conference & Journal Publications

- Zijun Long, Lipeng Zhuang, George Killick, Richard McCreadie, Gerardo Aragon Camarasa, Paul Henderson. Understanding and Mitigating Human-Labelling Errors in Supervised Contrastive Learning, *The 18th European Conference on Computer Vision*, full paper, 2024. [link] (h5-index 238, Core A\*)
- Zijun Long, Xuri Ge, Richard Mccreadie and Joemon Jose. CFIR: Fast and Effective Document-To-Image Retrieval for Large Corpora. *International ACM SIGIR Conference on Research and Development in Information Retrieval*, full paper, 2024. (h5-index 103, Core A\*) [link]
- Zijun Long, George Killick, Richard McCreadie, Gerardo Aragon Camarasa. RoboLLM: Robotic Vision Tasks Grounded on Multimodal Large Language Models, *IEEE International Conference on Robotics and Automation*, main, 2024. (h5-index 119, Core A\*) [link]
- Zijun Long, George Killick, Richard McCreadie, Gerardo Aragon Camarasa. MultiWay-Adapater: Adapting large-scale multimodal models for scalable image-text retrieval. *IEEE International Conference on Acoustics, Speech, and Signal Processing*, main, 2024. (h5-index 123) [link]
- Zijun Long, George Killick, Richard McCreadie, Gerardo Aragon Camarasa, Zaiqiao Meng. LaCViT: A Label-aware Contrastive Training Framework for Vision Transformers. *IEEE International Conference on Acoustics, Speech, and Signal Processing*, main, 2024. (h5-index 123) [link]

Zijun Long Jan. 2024

• Zijun Long, Lipeng Zhuang, George Killick, Richard McCreadie, Gerardo Aragon Camarasa, Zaiqiao Meng. CLCE: An Approach to Refining Cross-Entropy and Contrastive Learning for Optimized Learning Fusion, The 27th European Conference on Artificial Intelligence, full paper, 2024. [link] (h5-index 36, Core A)

- Zijun Long, Richard McCreadie, Muhammad Imran. CrisisViT: A Robust Vision Transformer for Crisis Image Classification. 20th International Conference on Information Systems for Crisis Response and Management, main, 2023. (h5-index 21)[link]
- Zijun Long, Richard McCreadie. Is Multi-Modal Data Key for Crisis Content Categorization on Social Media? 19th International Conference on Information Systems for Crisis Response and Management, main, 2022. (h5-index 21)[link]
- Zijun Long, Richard McCreadie. Automated Crisis Content Categorization for COVID-19 Tweet Streams. 18th International Conference on Information Systems for Crisis Response and Management, main, 2021. (h5-index 21)
- Zijun Long, Xiaohang Wang, Yingtao Jiang, Guofeng Cui, Li Zhang, Terrence Mak. Improving the Efficiency of Thermal Covert Channels in Multi-/many-core Systems. Design, Automation and Test in Europe, main, 2017. (h5index 49) [link]

### Papers Under Review

• Zixuan Yi\*, Zijun Long\*, Iadh Ounis, Craig Macdonald, Richard Mccreadie. Large Multi-modal Encoders for Recommendation, arXiv preprint arXiv:2310.20343, 2023. [link] \*:co-first author

### Honors & Awards

2024 IEEE International Conference on Acoustics, Speech, and Signal Processing SPS Travel Grants	Seoul, Korea 2024
18th International Conference on Information Systems for Crisis Response and Management <b>Best Student Paper Award</b>	Blacksburg, Virginia USA 2021
University of Glasgow Full PhD scholarship	Glasgow, UK 2020
South China University of Technology First Class Scholarship of the University	Guangzhou, China 2018
Imagine Cup 2018 Microsoft Global Student Technology Competition <b>Third Place</b>	Guangzhou, China 2018
National Innovation and Entrepreneurship Training Programme Excellent Result of Oral Defence (Nearly Top 5%)	Guangzhou, China 2018
Social Practice of the University Outstanding Participant	Guangzhou, China 2018

### **Professional Activities**

## Conference (Senior) Program Committee and Journal Review

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• BMVC Proceeding Chair (h5-index 77, CORE A)	2024
• AAAI (h5-index 212, CORE A*)	2023 - 2024
• ISCRAM (h5-index 21)	2022 - 2024

## **External Reviewer**

• ECCV (h5-index 238, CORE A\*) 2022 - 2024