

# Maojia Song

Homepage: [maojiasong.github.io](https://maojiasong.github.io)

Email: [maojia\\_song@mymail.sutd.edu.sg](mailto:maojia_song@mymail.sutd.edu.sg)

## EDUCATION

**Singapore University of Technology and Design**

01/2024 – Present

*Ph.D., Information Systems Technology and Design*

**Supervisor: Soujanya Poria**

**University of Leeds**

09/2019 – 08/2023

*B.Eng., Electronic and Electrical Engineering*

**Rank: 1st in the department**

First-Class Honours

## WORK EXPERIENCE

**Research Assistant**

09/2023 – 12/2023

*DeCLaRe Lab, Singapore University of Technology and Design*

Supervisor: Soujanya Poria

**Undergraduate Intern**

03/2022 – 09/2022

*Business AI Lab, Nanyang Technological University*

Supervisor: Teoh Teik Toe

**Undergraduate Intern**

10/2021 – 04/2022

*Computer Laboratory, University of Cambridge*

Supervisor: Pietro Liò

## HONORS & AWARDS

**OpenAI Researcher Access Program Grant**

2024

**Outstanding Student in InternLM Camp, Shanghai AI Laboratory**

2024

**Doctoral Research Scholarship granted by MOE, Singapore**

2024

**Best Undergraduate Thesis Finalist by EEE, University of Leeds**

2023

**Winner of U.S.-China Young Maker Competition**

2021

## PUBLICATIONS (\* denotes equal contributions)

- [2] Yew Ken Chia, Liying Cheng, **Maojia Song**, Hou Pong Chan, Chaoqun Liu, Mahani Aljunied, Soujanya Poria, Lidong Bing. “M-Longdoc: A Benchmark for Multimodal Super-Long Document Understanding and a Retrieval-Aware Tuning Framework.” *arXiv preprint*. 2024.

**Submitted to ACL 2025.**

**Under Review**

- [1] **Maojia Song**, Shang Hong Sim, Rishabh Bhardwaj, Hai Leong Chieu, Navonil Majumder, Soujanya Poria. “Measuring and Enhancing Trustworthiness of LLMs in RAG through Grounded Attributions and Learning to Refuse.” In: *Proceedings of ICLR*. 2025.

**Oral**

## PROJECTS

**Counterfactual Evaluation of LLMs: Disentangling Reasoning from Knowledge**

2023

- Designed an evaluation framework targeting LLM reasoning and knowledge abilities using counterfactual facts to isolate memory-based responses from genuine understanding.
- Developed and synthesized counterfactual test datasets using GPT-4 to assess LLM responses to logical and conceptual shifts.

- Evaluated GPT-4 and Llama2 models, revealing GPT-4's strengths in reasoning but weaknesses in knowledge comprehension, while Llama2 showed weaker overall performance but comparatively better knowledge understanding.

## Enhancing Vision-Language Model for Movie Scene Understanding 2024

- Developed a Vision-Language model using InternViT for visual encoding, and Qwen2 as the base language model, optimizing all components through a three-stage training process to enhance VQA performance across both fine-grained and complex questions.
- Designed a three-stage training recipe for complex, fine-grained scene understanding: first, detailed captions and scene images are used to fine-tune the visual encoder; second, the projector and LLM are further optimized with fine-grained VQA; and finally, all components are refined using additional movie frames sampled by similarity and complex VQA tasks designed to uncover the underlying answers behind simple visual relationships.

## INVITED TALKS

---

**SSNLP 2024** 11/2024  
*Singapore Symposium on Natural Language Processing*

## TEACHING

---

### Teaching assistant

- 50.045 Information Retrieval Fall 2024  
 Instructor: Soujanya Poria
- 50.006 User Interface Design and Implementation Fall 2024  
 Instructor: Simon Perrault

## PROFESSIONAL SERVICES

---

### Reviewer

- ICLR 2025