

YINHONG LIU

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EDUCATION EXPERIENCE

University of Cambridge, Language Technology Lab; PhD 2021.10 - present

- Supervisor: Prof. Nigel Collier
- Research area: Large Language Model (LLM) Evaluation and Alignment. Text and Multi-modal Evaluation Techniques. Controllable Text Generation. Data Synthesis for Alignment and Down-stream applications. Advanced Dialog Systems. Discourse Structure Analysis for Long-form Text.
- Scholarship: Cambridge Trust

University of Cambridge, Computer Lab; Mphil 2020 - 2021

- Subject: **Advanced Computer Science, in Natural Language Processing.**
- Grade: **Distinction.**
- Research area: Learning Functional Distributional Semantics from Multi-modal data.

University of Cambridge, Engineering Department; BA, MEng 2014 - 2018

- Subject: **Information Engineering and Computer Science.**
- Grade in Master of Engineering: **Merit degree** with honours.
- Grade in Bachelor of Arts: **1st Class.**
- Final year project: **Statistical enhancement of multi-channel audio data.**

WORK, RESEARCH EXPERIENCE

Amazon AWS AI; Seattle. *Applied Scientist Intern* Oct. 2024 - Present

- Develop Multi-Modal Summarization meta-Evaluation benchmark and evaluation methods.

Mircrosoft Research; Cambridge. *Research Intern* Jun. 2024 - Sep. 2024

- Developed an advanced Automatic Prompt Optimization pipeline to enhance Model Migration efficiency and improve Model Routing for Microsoft Copilot teams.

AI/ML, Apple; Cambridge. *Research Intern* Jun. 2023 - Oct. 2023

- Developed an innovative automatic Task-Oriented Dialog generation pipeline, incorporating advanced analysis of future virtual assistant response styles and simulating complex apps interactions. This work benefits both internal Apple Intelligence development and external NLP community.
- Authored a research paper detailing the dialog generation methodology, which was accepted by ACL 2024.

Gambit Research; London. *Full-time Quant-analyst* Oct. 2018 - Jul. 2020

- Working on various statistical football teams & games modelings, market price & volume predictions, strategies developing and back-testing.

Jigsaw Unintended Bias in Toxicity Classification, Kaggle competition Jun. 2019

- Got a 225th place out of 3165 teams (top 8%), a bronze medal, as a solo participant.

PUBLICATIONS

- **Yinhong Liu**, Zhijiang Guo, Tianya Liang, Ehsan Shareghi, Ivan Vulic and Nigel Collier. Aligning with Logic: Measuring, Evaluating and Improving Logical Consistency in Large Language Models. Under review.
- **Yinhong Liu**, Han Zhou, Zhijiang Guo, Ehsan Shareghi, Ivan Vulic, Anna Korhonen and Nigel Collier. Aligning with Human Judgement: The Role of Pairwise Preference in Large Language Model Evaluators. COLM 2024.
- Zongqian Li*, **Yinhong Liu***, Yixuan Su and Nigel Collier. Prompt Compression for Large Language Models: A Survey. Under review.
- **Yinhong Liu**, Yimai Fang, David Vandyke and Nigel Collier. TOAD: Task-Oriented Automatic Dialog generation pipeline with diverse system response style. ACL 2024.
- **Yinhong Liu**, Yixuan Su, Ehsan Shareghi and Nigel Collier. Unlocking Structure Measuring: Introducing PDD, an Automatic Metric for Positional Discourse Coherence. NAACL 2024, main conference.
- Han Zhou, Xingchen Wan, **Yinhong Liu**, Nigel Collier, Ivan Vulić, Anna Korhonen. Fairer Preferences Elicit Improved Human-Aligned Large Language Model Judgments. EMNLP 2024, main conference.
- Zhongshen Zeng, **Yinhong Liu**, Yingjia Wan, Jingyao Li, et al. MR-BEN: A Comprehensive Meta-Reasoning Benchmark for Large Language Models. NIPS 2024
- **Yinhong Liu**, Yixuan Su, Ehsan Shareghi and Nigel Collier. Plug-and-play Recipe Generation with Content Planning. EMNLP 2022, Generation, Evaluation & Metrics Workshop.
- **Yinhong Liu** and Guy Emerson. Learning Functional Distributional Semantics with Visual Data. ACL 2022, main conference.
- **Yinhong Liu** and Simon Godsill. Multi-channel audio statistical restoration. IEEE-ICSPCC, 2020.

PRIZE & EXTRA-CURRICULUM ACTIVITIES

Best Reviewer Award, EMNLP 2023, Natural Language Generation track.

PhD scholarship: Cambridge International Scholarship by Cambridge Trust.

Academic scholarship: Caldwell Scholarship by Corpus Christi College, University of Cambridge

Cambridge Chinese Drama Society: Protagonist in a university play, *Our Assassin*; Producer of two university plays *The Robin Murders* and *The Village*.

LANGUAGE & SKILLS

Languages: Chinese Mandarin (native), English (fluent), Chinese Cantonese (fluent).

Programming Languages: Python, SQL, Latex, C++.