

Shudong Liu

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Education

2022.08 – Present **PhD student of Computer Science**, University of Macau, Macau SAR, China
2018.09 – 2022.06 **BSc of Software Engineering**, South China Agricultural University, Guangzhou, China

Research Interests

Natural Language Processing and Machine Learning. Mainly focus on:

LLMs Understanding and Enhancement: Exploring Evaluation, Reasoning, Multi-model [1,2,7]; Alignment and Uncertainty Estimation [3,4] for Large Language Models

Natural Language Generation: Machine Translation; Low-resource; RAG [5,6]

Preprints (* denotes equal contribution)

[1] CultureVLM: Characterizing and Improving Cultural Understanding of Vision-Language Models for over 100 Countries.

Shudong Liu, Yiqiao Jin, Cheng Li, Derek F. Wong, Qingsong Wen, Lichao Sun, Haipeng Chen, Xing Xie, Jindong Wang.

Preprint [Incoming].

[2] Is Your Model Really A Good Math Reasoner? Evaluating Mathematical Reasoning with Checklist.

Zihao Zhou*, **Shudong Liu***, Maizhen Ning, Wei Liu, Jindong Wang, Derek F. Wong, Xiaowei Huang, Qiufeng Wang, Kaizhu Huang.

Preprint [<https://arxiv.org/abs/2407.08733>]. Submission of ICLR 2025.

[3] Learning from “Silly” Questions Improves Large Language Models, But Only Slightly.

Tingyuan Zhu, **Shudong Liu**, Yidong Wang, Derek F. Wong, Han Yu, Takahiro Shinozaki, Jindong Wang.

Preprint [<https://arxiv.org/abs/2411.14121>].

Publications (* denotes equal contribution)

[4] Can LLMs Learn Uncertainty on Their Own? Expressing Uncertainty Effectively in A Self-Training Manner.

Shudong Liu, Zhaocong Li, Xuebo Liu, Runzhe Zhan, Derek F. Wong, Lidia S. Chao, Min Zhang.

In: Proceedings of **EMNLP 2024**.

[5] Domain-Aware k-Nearest-Neighbor Knowledge Distillation for Machine Translation.

Zhexuan Wang*, **Shudong Liu***, Xuebo Liu, Miao Zhang, Derek F. Wong and Min Zhang.

In: Findings of **ACL 2024**.

[6] kNN-TL: k-Nearest-Neighbor Transfer Learning for Low-Resource Neural Machine Translation.

Shudong Liu, Xuebo Liu, Derek F. Wong, Zhaocong Li, Wenxiang Jiao, Lidia S. Chao, Min Zhang.

In: Proceedings of **ACL 2023**.

[7] Can LMs Generalize to Future Data? An Empirical Analysis on Text Summarization.

Chi Seng Cheang, Hou Pong Chan, Derek F Wong, Xuebo Liu, Zhaocong Li, Yanming Sun, **Shudong Liu** and Lidia S Chao.

In: Proceedings of **EMNLP 2023**.

- [8] A Graph Attention Interactive Refine Framework with Contextual Regularization for Jointing Intent Detection and Slot Filling.
Zhanbiao Zhu, Peijie Huang, Haojing Huang, **Shudong Liu** and Leyi Lao.
In: Proceedings of **ICASSP 2022**.
- [9] Cross-domain Slot Filling with Distinct Slot Entity and Type Prediction.
Shudong Liu, Peijie Huang, Zhanbiao Zhu, Hualin Zhang and Jianying Tan.
In: Proceedings of **NLPCC 2021 (Oral)**.
- [10] Slot Filling Model with Boundary Prediction and Dynamic Template.
Zhanbiao Zhu, Peijie Huang, Yexing Zhang, **Shudong Liu**, Hualin Zhang and Junyao Huang.
Journal of Chinese Information Processing 2023, 37(4): 72-80.
- [11] A Dependency-Guided Character-Based Slot Filling Model for Chinese Spoken Language Understanding.
Zhanbiao Zhu, Peijie Huang, Yexing Zhang, **Shudong Liu**, Hualin Zhang and Junyao Huang.
Journal of Chinese Information Processing 2022, 36 (8): 118-126.

Experience

2024.05 – Present, **Research Intern** at **Microsoft Research Asia**

- Advised by Prof. [Jindong Wang](#). Research Topic: Evaluation; Synthetic Data

2022.08 – Present, **Research Assistant** at **NLP2CT Lab, University of Macau**

- Advised by Prof. [Derek F. Wong](#) and Prof. [Xuebo Liu](#)

Professional Service

OpenReview Chair: NLPCC 2024

PC Member/Reviewer: ICLR 2025; AISTATS 2025; NeurIPS 2024 (Main, Benchmark); ACL Rolling Review 2023-2024 (ACL, EMNLP, NAACL); CCL 2023-2024

Student Volunteer: EMNLP 2024; MT Summit 2023

Teaching

Teaching Assistant: CISC7021 Applied Natural Language Processing (2022 Fall; 2023 Fall; 2024 Fall)

Teaching Assistant: CISC4000 Graduation Project (2023 Spring)

Major Awards and Honors

- **Outstanding Reviewer** at EMNLP 2024 (2024)
- **Teaching Assistant Certificate** at UM (2022)
- **Outstanding Undergraduate Graduation thesis** at SCAU (2022)
- **Outstanding Undergraduate Graduate** at SCAU (2022)
- **First-class Prize Scholarship** in the SCAU (2020-2022)
- **Third-class Prize** at the Shared Tasks of CCL 2021 (2021)

Academic Activities

- 2024.02, Give an invited talk **Transfer Learning for Low-Resource NMT** at University of Toronto