# Mingzhe Du

(+65) 9658 2486 / dumingzhex@gmail.com Innovation 4.0, 3 Research Link, Singapore, 117902

## RESEARCH INTERESTS

Code Generation / Bias Evaluation and Mitigation / Preference Alignment / Continual Learning

#### **EDUCATION**

# Nanyang Technological University

Singapore

PhD Candidate in Computer Science, College of Computing and Data Science

Aug. 2022 - Present

• Advisor: Prof. Anh Tuan Luu

## University of Melbourne

Melbourne, Australia

Master of Information Technology, Faculty of Engineering and Information Technology Oct. 2017 - Dec. 2019

- Specialization: Distributed Computing (Honorable Dissertation)
- NTU Exchange Scholarship.

# Central South University

Changsha, China

Bachelor of Information Security, School of Computer Science and Engineering

Sep. 2013 - Jun. 2017

• Excellent Scholarships (GPA: 3.7/4.0)

#### Professional Experience

## National University of Singapore, Institute of Data Science

Aug. 2021 - Present

- Research Associate (Advisor: Prof. See-Kiong Ng).
- Affiliated at Cisco-NUS Accelerated Digital Economy Corporate Laboratory.

#### ByteDance, Tiktok

Dec. 2019 - Aug. 2021

- Software Architect
- Implemented a high-performance NLP operator library in C++.
- Designed a general search engine, now powering the search services of TikTok and TouTiao.

## Microsoft, Asia-Pacific Research and Development Group

Nov. 2018 - Mar. 2019

- Research Intern (Mentor: Wei Liu).
- Contributed features to XiaoIce chatbot.
- Developed a text-to-image transformer that converts textual sentences into visually representative images.

#### Alibaba, Ant Finance Core Clearing Team

Jul. 2016 - Oct. 2016

- Software Engineer Intern.
- Contributed to a core system that supports Alipay payment account clearing flow, merging millions of orders in a minute-level interval for exchanging data with bank partners.

# Tencent, Social Network Group

Mar. 2016 - Jun. 2016

- Software Engineer Intern.
- Implemented a URL flow processing platform to analyze and detect suspicious URL content in public message traffic, enabling the filtering of malicious information.

#### Academic Services

- Conference Reviewer: AISTATS 2024, ICLR 2024, NeurIPS 2024, ECAI 2024, CLEF 2023
- Journal Reviewer: ACM Computing Survey
- Volunteer: WWW 2024, EMNLP 2024, AAAI 2023.
- STEM Mentor: University of Melbourne (2019-Present).

## **PUBLICATIONS**

- 1. Du, M., Luu, A. T., Ji, B., Liu, Q., & Ng, S. K. (2024). Mercury: A code efficiency benchmark for code large language models. In *The Thirty-Eighth Conference on Neural Information Processing Systems Datasets and Benchmarks Track* (NeurIPS'24).
- 2. Du, M., Luu, A. T., Ji, B., & Ng, S. K. (2024, March). From Static to Dynamic: Knowledge Metabolism for Large Language Models. In *Proceedings of the AAAI Conference on Artificial Intelligence* (Vol. 38, No. 21, pp. 23784-23786) (AAAI'24).
- 3. Ji, B., Liu, H., **Du, M.**, & Ng, S. K. (2024, March). Chain-of-Thought Improves Text Generation with Citations in Large Language Models. In *Proceedings of the AAAI Conference on Artificial Intelligence* (Vol. 38, No. 16, pp. 18345-18353) (**AAAI'24**).
- **4.** Huang, D., Zhang, J. M., **Du, M.**, Harman, M., & Cui, H. (2024). Rethinking the Influence of Source Code on Test Case Generation. *arXiv* preprint *arXiv*:2409.09464 (**Preprint**).
- **5.** Gollapalli, S. D., Ang, B. H., **Du, M.**, & Ng, S. K. (2024). Counseling Responses for Mental Health Forum Questions with Early Maladaptive Schema Prediction. In *ECAI 2024* (pp. 2556-2563). IOS Press. (**ECAI'24**).
- 6. Du, M., Hakam, M., Ng, S. K., & Bressan, S. (2023). Constituency-Informed and Constituency-Constrained Extractive Question Answering with Heterogeneous Graph Transformer. In *Transactions on Large-Scale Data-and Knowledge-Centered Systems LIII* (pp. 90-106). Berlin, Heidelberg: Springer Berlin Heidelberg. (TLDK'23).
- 7. Gollapalli, S. D., **Du**, **M.**, & Ng, S. K. (2023, April). Identifying Checkworthy Cure Claims on Twitter. In *Proceedings of the ACM Web Conference 2023* (pp. 4015-4019). (**WWW'23**).
- 8. Gollapalli, S. D., **Du**, **M.**, & Ng, S. K. (2023, September). Generating Reflective Questions for Engaging Gallery Visitors in ArtMuse. In *Proceedings of the AAAI Conference on Artificial Intelligence* (Vol. 37, No. 13, pp. 16434-16436) (**AAAI'23**).
- Du, M., Gollapalli, S. D., & Ng, S. K. (2022). NUS-IDS at CheckThat! 2022: Identifying Check-worthiness of Tweets using CheckthaT5. In CLEF (Working Notes) (pp. 468-477) (CLEF'22).

#### AWARDS

- First Runner-Up Award at the Singapore Healthcare AI Datathon 2022.
- First Prize at the Catalyst 2019: TREKK (A Path Recommendation System based on data aggregation and analysis).
- First Prize at the Codebrew 2019: After Dark (Finding safe and fast routes for pedestrians at night).
- First Prize at *The Mathematical Contest in Modeling (MCM, 2014)*: Study on the wreckage position of Malaysia Airlines flight *MH370*.
- Second Prize at the 8th National Information Security Competition (2015): An efficient express system based on hierarchical encryption.
- Second Prize at the Second National Internet of Things Application Innovation Competition (2015): Smart Dormitory Remote-Control System based on Raspberry Pi.
- Technology Pioneer Award at the Cyberspace Security Talent Development and Entrepreneurship Forum (2015).
- First Prize at the National Internet of Things Competition (2015).
- First Prize at the Central South University ACM School Competition (2013).

#### Miscellaneous

- Personal Website: https://mingzhe.space
- LinkedIn: Mingzhe's LinkedIn
- WeChat: spirit\_sonq
- GitHub: https://www.github.com/elfsong
- Work Email: mingzhe@nus.edu.sg / mingzhe001@ntu.edu.sg