

# Mingzhe Du

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Innovation 4.0, 3 Research Link, Singapore, 117902

## RESEARCH INTERESTS

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Code Generation / Preference Alignment / Bias Evaluation and Mitigation

## EDUCATION

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### Nanyang Technological University

Singapore

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

*Aug. 2022 – Present*

- Advisor: Prof. Anh Tuan Luu

### The University of Melbourne

Melbourne, Australia

*Master of Information Technology, Faculty of Engineering*

*Oct. 2017 – Dec. 2019*

- Specialization: Distributed Computing (Honorable Dissertation)

### 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

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### National University of Singapore, *Institute of Data Science*

*Aug. 2021 – Present*

- Research Associate (Advisor: Prof. See-Kiong Ng).
- Affiliated with 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

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- **Conference Reviewer:** *CIKM'25, ECAI'25, NeurIPS'25, ICML'25, ICLR'25, NAACL'24, EMNLP'24, AISTATS'24, ICLR'24, NeurIPS'24, ECAI'24, CLEF'23.*
- **Journal Reviewer:** *ACM Computing Survey.*
- **Volunteer:** *ACL'25, WWW'24, EMNLP'24, AAAI'23.*
- **STEM Mentor:** *The University of Melbourne (2019-Present).*

## PUBLICATIONS

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1. **Du, M.**, Luu, A. T., Wu, X., Huang, Y., Liu, Y., Huang, D., Liu, H., Ji, B., Zhang, J. M., & Ng, S.-K. (2025). Afterburner: Reinforcement Learning Facilitates Self-Improving Code Efficiency Optimization In **(PRAL@ICML'25)**.
2. D. Huang, J. Zhang, M. Harman, **Du, M.**, H. Cui (2025). Measuring the Influence of Incorrect Code on Test Generation In **(ICSE'25)**.
3. Qing, Y., Zhu, B., **Du, M.**, Guo, Z., Zhuo, T. Y., Zhang, Q., ... & Tuan, L. A. (2025). EffiBench-X: A Multi-Language Benchmark for Measuring Efficiency of LLM-Generated Code. In *arXiv:2505.13004* **(Preprint)**.
4. **Du, M.**, Luu, A. T., Ji, B., Wu, X., Huang, D., Zhuo, T. Y., ... & Ng, S. K. (2025). CodeArena: A Collective Evaluation Platform for LLM Code Generation. In **(ACL'25 Demo)**.
5. Wu, X., Pan, L., Xie, Y., Zhou, R., Zhao, S., Ma, Y., **Du, M.**, ... & Wang, W. Y. (2024). AntiLeak-Bench: Preventing Data Contamination by Automatically Constructing Benchmarks with Updated Real-World Knowledge In **(ACL'25 Main)**.
6. Duan M., **Du, M.**, Zhao R., Wang M., Wu Y., Shadbolt N., & He B. (2024). Current Model Licensing Practices are Dragging Us into a Quagmire of Legal Noncompliance In **(ICML'25 Oral)**.
7. Ji, B., Liu, H., **Du, M.**, Li, S., Liu, X., Ma, J., ... & Ng, S. K. (2025). Towards Verifiable Text Generation with Generative Agent. In *Proceedings of the AAAI Conference on Artificial Intelligence (Vol. 39, No. 23, pp. 24230-24238)* **(AAAI'25 Oral)**.
8. **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)**.
9. Ang, B. H., Gollapalli, S. D., **Du, M.**, & Ng, S. K. (2025). Unraveling Online Mental Health Through the Lens of Early Maladaptive Schemas: AI-Enabled Content Analysis of Online Mental Health Communities. In *Journal of Medical Internet Research*, 27, e59524. **(JMIR'25)**
10. **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)**.
11. 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)**.
12. 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)**.
13. 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)**.
14. **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)**.
15. 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)**.
16. 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)**.
17. **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)**.

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## MISCELLANEOUS

- **LinkedIn:** *Mingzhe's LinkedIn*    **WeChat:** *spirit\_song*
- **GitHub:** <https://www.github.com/elfsong>
- **Business Email:** [mingzhe@nus.edu.sg](mailto:mingzhe@nus.edu.sg) | [mingzhe001@ntu.edu.sg](mailto:mingzhe001@ntu.edu.sg)