

Tianyu Zhang - Curriculum Vitae

PERSONAL INFORMATION

Tianyu Zhang
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Mila, Université de Montréal
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EDUCATION

- 09/2021–present **Ph.D. Student, Department of Computer Science and Operations Research**
MILA, Université de Montréal, Canada
Supervisor: Dr. Yoshua Bengio; **GPA:** 4.30/4.30
- 09/2020–06/2021 **M.Sc. in Computer Science, Department of Computer Science and Operations Research**
MILA, Université de Montréal, Canada
Supervisor: Dr. Yoshua Bengio; **GPA:** 4.30/4.30
- 09/2018–01/2020 **M.S. in Applied Mathematics, Courant Institute of Mathematical Sciences**
New York University, USA
Advisor: Dr. Petter Kolm; **GPA:** 3.8/4.0
- 09/2014–07/2018 **B.S. in Mathematics and B.Econ. in Finance, Institute for Advanced Study**
Wuhan University, China
Advisor: Dr. Yingfeng Fang; **GPA:** 3.94/4.00

Journal Publications

1. MAI, V., MAISONNEUVE, P., ZHANG, T., NEKOEI, H., PAULL, L., AND LESAGE-LANDRY, A. Multi-agent reinforcement learning for fast-timescale demand response of residential loads. *Machine Learning* 113, 8 (August 2024), 5203–5234

Conference Publications

1. ZHANG*, T., WU*, Y., CHEN*, K., HUI*, Y., BERG-KIRKPATRICK, T., AND DUBNOV, S. Large-scale contrastive language-audio pretraining with feature fusion and keyword-to-caption augmentation. In *ICASSP 2023 - 2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)* (2023), pp. 1–5
2. ZHANG*, T., WILLIAMS*, A. R., WOZNY*, P., COHRS*, K.-H., PONSE, K., JIRALERSPONG, M., PHADE, S. R., SRINIVASA, S., LI, L., ZHANG, Y., GUPTA, P., ACAR, E., RISH, I., BENGIO, Y., AND ZHENG, S. Ai for global climate cooperation: Modeling global climate negotiations, agreements, and long-term cooperation in rice-n. In *Proceedings of the 42nd International Conference on Machine Learning (ICML)* (July 2025). Poster presentation, ICML 2025
3. ZHANG*, T., LI*, L., BU*, Z., WANG, S., HE, H., FU, J., WU, Y., BIAN, J., CHEN, Y., AND BENGIO, Y. Map: Low-compute model merging with amortized pareto fronts via quadratic approximation. *arXiv preprint arXiv:2406.07529* (2024)
4. ZHANG*, T., WANG*, S., LI, L., ZHANG, G., TASLAKIAN, P., RAJESWAR, S., FU, J., LIU, B., AND BENGIO, Y. Vcr: A task for pixel-level complex reasoning in vision-language models via restoring occluded text. In *International Conference on Learning Representations (ICLR)* (Jan 2025). Poster
5. ZHANG*, T., RODRIGUEZ*, J. A., JIAN*, X., PANIGRAHI*, S. S., FEIZI, A., PURI, A., SURESH, A. K., SAVARD, F., MASRY, A., NAYAK, S., AWAL, R., MASSOUD, M., ABASKOHI, A., LI, Z., WANG, S., NOEL, P., RICHTER, M. L., VADACCHINO, S., AGARWAL, S., BISWAS, S., AND Bigdocs: An open dataset for training multimodal models on document and code tasks. In *International Conference on Learning Representations (ICLR)* (Jan 2025). Poster
6. DUQUE, J. A., AGHAJOHARI, M., COOIJMANS, T., CIUCA, R., ZHANG, T., GIDEL, G., AND COURVILLE, A. Advantage alignment algorithms. In *International Conference on Learning Representations (ICLR)* (Jan 2025). Oral
7. QU, X., BAI, Y., MA, Y., ZHOU, Z., LO, K. M., LIU, J., YUAN, R., MIN, L., LIU, X., ZHANG, T., DU, X., GUO, S., LIANG, Y., LI, Y., WU, S., ZHOU, J., ZHENG, T., MA, Z., HAN, F., XUE, W., XIA, G., BENETOS, E., YUE, X., LIN, C., TAN, X., HUANG, S. W., FU, J., AND ZHANG, G. Mupt: A generative symbolic music pretrained transformer. In *International Conference on Learning Representations (ICLR)* (January 2025). Poster
8. JIRALERSPONG, M., SUN, B., VUCETIC, D., ZHANG, T., BENGIO, Y., GIDEL, G., AND MALKIN, N. Expected flow networks in stochastic environments and two-player zero-sum

- games. In *International Conference on Learning Representations (ICLR)* (2024). Submitted to ICLR 2024
9. JAIN, M., BENGIO, E., HERNANDEZ-GARCIA, A., RECTOR-BROOKS, J., DOSSOU, B. F. P., EKBOTE, C. A., FU, J., ZHANG, T., KILGOUR, M., ZHANG, D., SIMINE, L., DAS, P., AND BENGIO, Y. Biological sequence design with GFlowNets. In *Proceedings of the 39th International Conference on Machine Learning* (17–23 Jul 2022), K. Chaudhuri, S. Jegelka, L. Song, C. Szepesvari, G. Niu, and S. Sabato, Eds., vol. 162 of *Proceedings of Machine Learning Research*, PMLR, pp. 9786–9801
 10. SCHMIDT, V., LUCCIONI, A., TENG, M., ZHANG, T., REYNAUD, A., RAGHUPATHI, S., COSNE, G., JURAVER, A., VARDANYAN, V., HERNÁNDEZ-GARCÍA, A., AND BENGIO, Y. ClimateGAN: Raising climate change awareness by generating images of floods. In *International Conference on Learning Representations* (2022)

Workshop Papers and Preprints

1. ZHANG*, T., WANG*, S., LI, L., ZHANG, G., TASLAKIAN, P., RAJESWAR, S., FU, J., LIU, B., AND BENGIO, Y. Vcr: Visual caption restoration. In *The First Workshop on System-2 Reasoning at Scale, NeurIPS 2024* (2024)
2. ZHANG*, T., WANG*, X., TAI, Z., LI, L., CHI, J., TIAN, J., HE, H., AND WANG, S. Strict: Stress test of rendering images containing text. *arXiv preprint arXiv:2505.18985* (2025)
3. ZHANG, T., LI, L., ZHU, T., WANG, S., WANG, C., AND CHEN, Y. Rethinking decentralized learning: Towards more realistic evaluations with a metadata-agnostic approach. *MCDC @ ICLR* (2025)
4. ZHU, T., ZHANG, T., WANG, M., ZHOU, Z., AND WANG, C. A single global merging suffices: Recovering centralized learning performance in decentralized learning. In *Proceedings of the ICLR 2025 Workshop on Weight Space Learning* (Mar 2025)
5. MAI, V., ZHANG, T., AND LESAGE-LANDRY, A. Multi-agent reinforcement learning for renewable integration in the electric power grid. In *NeurIPS 2021 Workshop on Tackling Climate Change with Machine Learning* (2021)

Technical Reports

1. BENGIO, Y., GUPTA, P., RADOVIC, D., SCHOLL, M., WILLIAMS, A., DE WITT, C. S., ZHANG, T., AND ZHANG, Y. (private)-retroactive carbon pricing [(p)recap]: A market-based approach for climate finance and risk assessment, 2022

INDUSTRY EXPERIENCES

- 04/2024–08/2025 **ServiceNow Research**, Montreal, QC
Position: Machine Learning Visiting Researcher
- 05/2019–08/2019 **FactSet Research System Inc.**, New York City, NY
Position: Data Scientist Intern

Organizing Committee

1. **[NewInML@NeurIPS'25]**: [New In ML at NeurIPS 2025](#). Role: Workshop Main Organizer, Program Chair, Reviewer
2. **[NewInML@ICML'25]**: [New In ML at ICML 2025](#). Role: Workshop Main Organizer, Program Chair, Reviewer
3. **[AI4CC'22]**: [AI for Global Climate Cooperation 2022](#). Role: Main Organizer, Program Chair, Reviewer

Reviews

1. **[NeurIPS 25]**: Neural Information Processing Systems 2025. Role: Reviewer, 9 Manuscripts
2. **[ICML' 25]**: International Conference on Machine Learning 2025. Role: Reviewer, 7 Manuscripts
3. **[ICML NewInML 25]**: International Conference on Machine Learning NewInML Workshop 2025. Role: Reviewer, 40 Manuscripts
4. **[ICLR 25]**: International Conference on Learning Representations 2025. Role: Reviewer, 2 Manuscripts
5. **[ICASSP 25]**: International Conference on Acoustics, Speech, and Signal Processing 2025. Role: Reviewer, 6 Manuscripts
6. **[ACL REALM 25]** Association for Computational Linguistics REALM Workshop 2025. Role: Reviewer, 3 Manuscripts
7. **[TNNLS 25]** IEEE Transactions on Neural Networks and Learning Systems 2025. Role: Reviewer, 1 Manuscripts
8. **[Environmental Data Science]** Environmental Data Science 2024. Role: Reviewer, 1 Manuscripts
9. **[NeurIPS 24]**: Neural Information Processing Systems 2024. Role: Reviewer, 6 Manuscripts
10. **[ICML 24]**: International Conference on Machine Learning 2024. Role: Reviewer, 6 Manuscripts
11. **[ICLR 24]**: International Conference on Learning Representations 2024. Role: Reviewer, 3 Manuscripts
12. **[NeurIPS 23]**: Neural Information Processing Systems 2023. Role: Reviewer, 3 Manuscripts
13. **[ICML 23]**: International Conference on Machine Learning 2023. Role: Reviewer, 6 Manuscripts
14. **[AI4GCC 22]**: AI for Global Climate Cooperation 2022. Role: Reviewer, 4 Manuscripts
15. **[NeurIPS 22]**: Neural Information Processing Systems 2022. Role: Reviewer, 3 Manuscripts
16. **[ICML 22]**: International Conference on Machine Learning 2022. Role: Reviewer, 1 Manuscripts
17. **[ICML AI4ABM 22]**: International Conference on Machine Learning AI4ABM Workshop 2022. Role: Reviewer, 3 Manuscripts

LANGUAGES

Mandarin (native)
English (GRE: 330/340)

REFERENCE

Prof. Yoshua Bengio (M.Sc. & Ph.D. advisor)

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Institute: Department of Computer Science and Operations Research
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