

# Yimu Wang

200 University Ave W ◊ Waterloo, ON, CA

📧 <https://yimuwangcs.github.io>, 📞 Yimu Wang, 🌐 Yimu Wang, ✉ [yimu.wang@uwaterloo.ca](mailto:yimu.wang@uwaterloo.ca)

## Education and Research Experience

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**University of Waterloo, Computer Science, Ph.D.** May. 2022 - Apr. 2026 (Expected)  
Grades 96.5/100. Supervised by Prof. Krzysztof Czarnecki. Focusing on **Cross-modal Retrieval** and **Point Clouds Segmentation**.

**Tsinghua University**, Research Assistant Oct. 2021 – Apr. 2022  
Focus on multi-modal retrieval and federated learning supervised by Jingjing Liu and Yang Liu. The project is published on ICLR'23.

**Nanjing University, Computer Science and Technology, M.Sc.** Sep. 2018 - Jun. 2021  
Supervised by Prof. Lijun Zhang, in LAMDA Group. Focus on **Image Retrieval** and **Optimization**.

**Northwestern Polytechnical University, Software Engineering, B.Eng** Sep. 2014 - Jun. 2018

## Industry Experience

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1. **SONY AI**, Research Intern Feb. 2024 – Now  
Research on knowledge transfer between foundation models.
2. **Borealis AI (Royal Bank of Canada)**, Research Intern Sep. 2023 – Jan. 2024  
Research on Temporal Point Process (prediction on next transaction). Paper submitted to ICML'24.
3. **Alibaba, Turing Lab**, Research Intern May. 2021 – Sep. 2021  
Focus on multi-modal anomaly detection. Collect multi-modal user data to analyze the pattern and design a novel architecture for detection.
4. **Derivatives-China**, Quant Research Intern Jan. 2021 – Apr. 2021  
Research on powerful deep learning systems for A-Shares.
5. **NetEase, IE, AILab**, AI Research Intern Aug. 2020 – Sep. 2020  
Research on the 3D face reconstruction from a single RGB image.
6. **Tencent, IEG, Lightspeed & Quantum Studios Group**, Research Intern Jun. 2020 – Jul. 2020  
Research on abnormal text and image detection. We designed a novel framework for detecting illegal text and image. The model has been employed in the LOL mobile game.
7. **Megvii (Face++)**, Research Intern Jan. 2018 – Nov. 2019  
Participate in several research projects (GAN, Domain Adaptation, Fine-grained Image Search) at Nanjing Research. Projects have been published at international conferences, *e.g.*, WACV.

## Selected Papers (CVPR, EMNLP, NeurIPS, ICLR, AAAI, IJCAI, ACM MM, WACV)

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[Cross-modal Retrieval](#) (EMNLP, ICLR, ACM MM, IJCAI)

1. **Balance Act: Mitigating Hubness in Cross-Modal Retrieval with Query and Gallery Banks**  
Yimu Wang ✉, Xiangru Jian, Bo Xue.  
[EMNLP'23](#), Oral.
2. **Video-Text Retrieval by Supervised Multi-Space Multi-Grained Alignment**  
Yimu Wang, Peng Shi.  
[Findings of EMNLP'23](#).
3. **InvGC: Robust Cross-Modal Retrieval by Inverse Graph Convolution**  
Xiangru Jian, Yimu Wang ✉.  
[Findings of EMNLP'23](#).

4. **Multimodal Federated Learning via Contrastive Representation Ensemble**  
Qiyang Yu, **Yimu Wang**, Ke Xu, Yang Liu, Jingjing Liu  
International Conference on Learning Representations (ICLR) 2023
5. **Deep Unified Cross-Modality Hashing by Pairwise Data Alignment**  
**Yimu Wang**, Bo Xue, Quan Cheng, Yuhui Chen, and Lijun Zhang ✉  
International Joint Conference on Artificial Intelligence (IJCAI) 2021
6. **Searching Privately by Imperceptible Lying: A Novel Private Hashing Method with Differential Privacy**  
**Yimu Wang**, Shiyin Lu, and Lijun Zhang ✉  
ACM International Conference on Multimedia (ACM MM) 2020  
[Vision \(CVPR, WACV\)](#)
7. **Cooperation or Competition: Avoiding Player Domination for Multi-target Robustness by Adaptive Budgets**  
**Yimu Wang**, Dinghuai Zhang, Yihan Wu, Heng Huang, Hongyang Zhang  
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2023, NeurIPS 2022 Workshop
8. **An Adversarial Domain Adaptation Network for Cross-Domain Fine-Grained Recognition**  
**Yimu Wang**, Ren-Jie Song, Xiu-Shen Wei, and Lijun Zhang ✉  
IEEE Winter Conference on Applications of Computer Vision (WACV) 2020  
[Optimization \(NeurIPS, AAAI, IJCAI\)](#)
9. Multiobjective Lipschitz Bandits under Lexicographic Ordering  
Bo Xue, Ji Cheng, Fei Liu, **Yimu Wang**, Qingfu Zhang  
AAAI'24
10. Lost Domain Generalization Is a Natural Consequence of Lack of Training Domains  
**Yimu Wang**, Yihan Wu, Hongyang Zhang  
AAAI'24
11. **Efficient Algorithms for Generalized Linear Bandits with Heavy-tailed Rewards**  
Bo Xue, **Yimu Wang**, Yuanyu Wan, Jinfeng Yi, and Lijun Zhang ✉  
Conference on Neural Information Processing Systems (NeurIPS) 2023
12. **Nearly Optimal Regret for Stochastic Linear Bandits with Heavy-Tailed Payoffs**  
Bo Xue, Guanghui Wang, **Yimu Wang**, and Lijun Zhang ✉  
International Joint Conference on Artificial Intelligence (IJCAI) 2020

### Selected Honors and Awards

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| 1. AAAI 2024 Travel and Diversity & Inclusion Award               | Jan. 2024 |
| 2. EMNLP 2023 Diversity and Inclusion Award                       | Nov. 2023 |
| 3. CVPR 2023 Travel Award and Diversity, Equity & Inclusion Award | Jun. 2023 |
| 4. QueerInAI Graduate Application Award                           | Dec. 2021 |