









# Ning Liang-bo










 Homepage  
 Google Scholar  
 +86 15138192786  
 biglemon1123@gmail.com  
 Hong Kong, China






## Education

- Sep. 2023 – Present  **Ph.D., Computing,**  
The Hong Kong Polytechnic University (PolyU), Hong Kong, China  
**Supervisor: Prof. Qing Li & Prof. Wenqi Fan**
- Sep. 2020 – Jun. 2023  **M.E., Control Science and Engineering,** GPA:88.00/100 or 3.75/4  
Northwestern Polytechnical University (NPU), Xi'an, China  
**Supervisor: Prof. Zhun-ga Liu**
- Sep. 2016 – Jun. 2020  **B.E., Automation,** GPA:83.47/100 or 3.34/4  
Northwestern Polytechnical University (NPU), Xi'an, China







## Publications (First Author)

- 2025  **L. Ning,** Z. Liang, Z. Jiang, et al., "A Survey of WebAgents: Towards Next-Generation AI Agents for Web Automation with Large Foundation Models." *SIGKDD Conf. Knowl. Discovery Data Min.*, 2025. (CCF-A, Online)
-  **L. Ning,** W. Fan, Q. Li, "Exploring Backdoor Attack and Defense for LLM-empowered Recommendations." *arXiv*, 2025. (Preprint)
-  **L. Ning,** Z. Zhang, W. Ding, et al., "Multi-level Distribution Alignment for Multi-source Universal Domain Adaptation." *IEEE Trans. Neural Networks Learn. Syst.*, 2025. (JCR:Q1, IF:10.2, Online)
-  **L. Ning,** W. Fan, Q. Li, "Retrieval-Augmented Purifier for Robust LLM-Empowered Recommendation." *arXiv*, 2025. (Preprint)
- 2024  **L. Ning,** Z. Dai, W. Fan, et al., "Joint Universal Adversarial Perturbations with Interpretations," *arXiv*, 2024. (Preprint)
-  **L. Ning,** S. Wang, W. Fan, et al., "CheatAgent: Attacking LLM-Empowered Recommender Systems via LLM Agent," *SIGKDD Conf. Knowl. Discovery Data Min.*, 2024. (CCF-A, Online)
-  **L. Ning,** Z. Dai, J. Su, et al., "Interpretation-Empowered Neural Cleanse for Backdoor Attacks," *The Web Conference*, 2024. (CCF-A, Online)
- 2022  Z. Liu (Master Supervisor), **L. Ning,** and Z. Zhang, "A New Progressive Multi-Source Domain Adaptation Network with Weighted Decision Fusion," *IEEE Trans. Neural Networks Learn. Syst.*, 2022, doi: 10.1109/TNNLS.2022.3179805. (JCR:Q1, IF:10.2, Online)
- 2021  **L. Ning,** Z. Liu, and Z. Zhang, "Domain Adaptation Based Multi-Source Data Fusion for Pattern Classification," *IEEE CIE Int. Conf. Radar*, 2021. (Online)

## Publications (Collaboration)









- 2025  Y. Zhang, H. Qu, **L. Ning,** et al. "SSD4Rec: a structured state space duality model for efficient sequential recommendation." *Transactions on Information Systems*, 2024. (CCF-A, Online)
-  Z. Zhang, Z. Liu, **L. Ning,** et al. "Belief-based fuzzy and imprecise clustering for arbitrary data distributions." *IEEE Transactions on Fuzzy Systems*, 2025. (JCR:Q1, IF:10.8, Online)
-  X. Yuan, **L. Ning,** W. Fan, and Q. Li. "mKG-RAG: Multimodal Knowledge Graph-Enhanced RAG for Visual Question Answering." *arXiv*, 2025. (Preprint)

## Publications (Collaboration) (continued)




- 2024  J. Huang, S. Wang, **L. Ning**, et al., "Towards Next-Generation Recommender Systems: A Benchmark for Personalized Recommendation Assistant with LLMs." *arXiv*, 2025. (**Preprint**)
- 2024  H. Qu, **L. Ning**, R. An, W. Fan, et al., "A Survey of Mamba," *arXiv*, 2024. (**Preprint**)
- 2024  Y. Ding, W. Fan, **L. Ning**, et al., "A survey on RAG meets LLMs: Towards retrieval-augmented large language models," *SIGKDD Conf. Knowl. Discovery Data Min.*, 2024. (**CCF-A, Online**)
- 2023  Z. Zhang, Z. Liu, **L. Ning**, et al., "Representation of Imprecision in Deep Neural Networks for Image Classification," *IEEE Trans. Neural Networks Learn. Syst.*, 2022. (**JCR:Q1, IF:10.2, Online**)
- 2023  Z. Zhang, **L. Ning**, Z. Liu, et al., "Mining and Reasoning of Data Uncertainty-induced Imprecision in Deep Image Classification," *Inf. Fusion*, 2023. (**JCR:Q1, IF:10.2, Online**)
- 2022  Z. Liu, Z. Zhang, Q. Pan, and **L. Ning**, "Unsupervised Change Detection From Heterogeneous Data Based on Image Translation," *IEEE Trans. Geosci. Remote Sens.*, vol. 60, pp. 1-13, 2022. (**JCR:Q1, IF:8.125, Online**)

## Miscellaneous Experience




### Awards and Achievements

- 2023  **Excellent Master's Thesis**, NPU, Xi'an, China.
- 2023  **Outstanding Graduates**, NPU, Xi'an, China.
- 2022  **The National Scholarship**, Ministry of Education, China.
- 2022  **The First Prize Scholarship**, NPU, Xi'an, China.
- 2019  **The Second Prize Scholarship**, NPU, Xi'an, China.
- 2018  **The First Prize Scholarship**, NPU, Xi'an, China.
- 2018  **The Endress+Hauser Scholarship**, NPU, Xi'an, China.
- 2017  **The Second Prize Scholarship**, NPU, Xi'an, China.

### Certifications

- 2020  **The First Prize of the 15-th National University Students Intelligent Car Race.**
- 2019  **The First Prize of the 14-th National University Students Intelligent Car Race.**
- 2018  **The Second Prize of the 13-th National University Students Intelligent Car Race.**  
Awarded by Intelligent Car Race Organization Committee.

## Skills and Research Interests

- Coding  Pytorch, Matlab, C/C++,  $\LaTeX$ , Git.
- Languages  Mandarin Chinese (Native), English (CET6, IELTS 6.5).
- Res. Interests  Data Mining, WebAgents, Recommender Systems, Adversarial Attack, Domain Adaptation, Pattern Recognition, XAI.