

Penghui Yang

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Education

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| Nanyang Technological University, PhD in Artificial Intelligence | Aug 2024 – present |
| Nanjing University of Aeronautics and Astronautics, BS in Computer Science | Sept 2019 – June 2023 |

Experience

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| Project Officer, Nanyang Technological University – Singapore | Oct 2023 – Aug 2024 |
| Associate Member, Sea AI Lab – Singapore | Oct 2024 – Jan 2026 |

Publications

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| Multi-Label Knowledge Distillation <i>Penghui Yang, Ming-Kun Xie, Chen-Chen Zong, Lei Feng, Gang Niu, Masashi Sugiyama, Sheng-Jun Huang</i> 10.1109/ICCV51070.2023.01584 (ICCV'23) | 2023 |
| Sailor2: Sailing in South-East Asia with Inclusive Multilingual LLMs Longxu Dou, Qian Liu, Fan Zhou, Changyu Chen, Zili Wang, Ziqi Jin, Zichen Liu, Tongyao Zhu, Cunxiao Du, <i>Penghui Yang, Haonan Wang, Jiaheng Liu, Yongchi Zhao, Xiachong Feng, Xin Mao, Man Tsung Yeung, Kunat Pipattanakul, Fajri Koto, Min Si Thu, Hynek Kydlíček, Zeyi Liu, Qunshu Lin, Sittipong Sripaisarnmongkol, Kridtaphad Tran, Mike Zhang, Shiqi Chen, Tianyu Pang, Chao Du, Xinyi Wan, Wei Lu, Min Lin</i> 10.48550/arXiv.2502.12982 (arXiv preprint arXiv:2502.12982) | 2025 |
| LongSpec: Long-Context Lossless Speculative Decoding with Efficient Drafting and Verification <i>Penghui Yang, Cunxiao Du, Fengzhuo Zhang, Haonan Wang, Tianyu Pang, Chao Du, Bo An</i> 10.48550/arXiv.2502.17421 (ES-FoMo III: 3rd Workshop on Efficient Systems for Foundation Models) | 2025 |
| A Unified Open Adapter for Open-World Noisy Label Learning: Data-Centric and Learning-Based Insights Chen-Chen Zong, <i>Penghui Yang, Ming-Kun Xie, Sheng-Jun Huang</i> 10.1109/TCSVT.2025.3550899 (TCSVT'25) | 2025 |
| FLAIN: Mitigating Backdoor Attacks in Federated Learning via Flipping Weight Updates of Low-Activation Input Neurons Binbin Ding, <i>Penghui Yang, Sheng-Jun Huang</i> 10.1145/3731715.3733342 (ICMR'25) | 2025 |
| Dual-head Knowledge Distillation: Enhancing Logits Utilization with an Auxiliary Head <i>Penghui Yang, Chen-Chen Zong, Sheng-Jun Huang, Lei Feng, Bo An</i> 10.1145/3711896.3736915 (SIGKDD'25) | 2025 |
| FedDLAD: A Federated Learning Dual-Layer Anomaly Detection Framework for Enhancing Resilience Against Backdoor Attacks Binbin Ding, <i>Penghui Yang, Sheng-Jun Huang</i> 10.24963/ijcai.2025/559 (IJCAI'25) | 2025 |
| AutoMAT: A Hierarchical Framework for Autonomous Alloy Discovery <i>Penghui Yang, Chendong Zhao, Bijun Tang, Zhonghan Zhang, Xinrun Wang, Yanchen Deng, Yuhao Lu, Cuntai Guan, Zheng Liu, Bo An</i> | 2025 |

[10.48550/arXiv.2507.16005](https://arxiv.org/abs/2507.16005) (arXiv preprint arXiv:2507.16005)

MATAI: A Generalist Machine Learning Framework for Property Prediction and Inverse Design of Advanced Alloys

2025

Yanchen Deng, Chendong Zhao, Yixuan Li, Bijun Tang, Xinrun Wang, Zhonghan Zhang, Yuhao Lu, *Penghui Yang*, Jianguo Huang, Yushan Xiao, Cuntai Guan, Zheng Liu, Bo An

[10.48550/arXiv.2511.10108](https://arxiv.org/abs/2511.10108) (arXiv preprint arXiv:2511.10108)

Anatomy of a Hybrid Mind: Deconstructing Hybrid Reasoning in Large Language Models

2025

Penghui Yang, Fengzhuo Zhang, Yifan Hou, Tianyu Pang, Cunxiao Du, Bo An, Chao Du

openreview.net/forum?id=zfZxymLbSv (OpenReview)