XI DING

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SUMMARY

Xi Ding holds a Master of Computing degree from the Australian National University (ANU), Canberra, in 2025, where he specialized in machine learning. He is currently a research intern at Carnegie Mellon University (CMU) and a visiting scholar at the Australian Research Council (ARC) Research Hub hosted by Griffith University, contributing to research on interpretable, robust, and trustworthy artificial intelligence (AI). His research focuses on developing reliable and interpretable machine learning approaches through trust-aware domain adaptation, temporally consistent learning frameworks, uncertainty-guided kernel methods, and graph-based learning for structured data. Xi has published in leading venues such as Advances in Neural Information Processing Systems (NeurIPS), and in workshops at The ACM Web Conference (WWW), where his work received a Best Paper Award and an Oral presentation. Beyond research, he actively contributes to the academic community as a reviewer for conferences including ICLR, AAAI, AVSS, and ICME, and served as a Workshop Coordinator at WWW 2025.

RESEARCH INTERESTS

Machine Learning, Representation Learning, Interpretable and Transparent AI, Vision-language Models

EDUCATION

Australian National University July 2023 - July 2025
Master of Computing (Machine Learning) GPA (WES converted): 3.77/4.0
Main Coursework: Machine Learning, Deep Learning, Reinforcement Learning, Computer Vision.

China Agricultural University & University of Colorado Denver Sep. 2019 - June 2023
Bachelor of Arts (Economics) GPA: 3.37/4.0
Main Coursework: Statistics, Numerical Analysis, Econometrics, Finance.

PUBLICATIONS

Peer-Reviewed Publications

[1] **X. Ding**, L. Wang, P. Koniusz, and Y. Gao, "Graph your own prompt," in *Advances in Neural Information Processing Systems (NeurIPS) 2025.*

[2] **X. Ding** and L. Wang, "The journey of action recognition," in *Companion Proceedings of the ACM on Web Conference 2025, May 2025, pp. 1869–1884. (Best Paper Award)*

[3] **X. Ding** and L. Wang, "Do language models understand time?," in *Companion Proceedings of the ACM on Web Conference 2025, May 2025, pp. 1855–1868. (Oral)*

Preprints

[4] **X. Ding** and L. Wang, "Quo vadis, anomaly detection? LLMs and VLMs in the spotlight," 2025. (arXiv).

Manuscripts Under Review

[5] **X. Ding**, L. Wang, Y. Gao, and P. Koniusz, "Trust-aware domain adaptation via joint feature-prediction discrepancy," submitted to *AAAI Conference on Artificial Intelligence (AAAI)*, 2026.

[6] **X. Ding**, L. Wang, P. Koniusz, and Y. Gao, "Learning time in static classifiers," submitted to *AAAI Conference on Artificial Intelligence (AAAI)*, 2026.

[7] **X. Ding**, L. Wang, Y. Gao, and P. Koniusz, "Subspace kernel learning on tensor sequences," submitted to *International Conference on Learning Representations (ICLR)*, 2026.

[8] **X. Ding**, L. Wang, P. Koniusz, and Y. Gao, "When the brain sees beyond pixels: creative brain-to-vision," submitted to *International Conference on Learning Representations (ICLR)*, 2026.

RESEARCH EXPERIENCE

Xu Lab, Carnegie Mellon University, Pittsburgh, USA Oct. 2025 - Present
Research Intern to Assoc. Prof. Min Xu
Conducting research on explainable machine learning, with a focus on language models and vision-language models.

ARC Research Hub, Griffith University, Brisbane, Australia Mar. 2025 - Present
ARC Hub Scholar (TIME@ARC Hub and Griffith) to Prof. Yongsheng Gao
Researched interpretable and explainable machine learning to advance transparent, robust, and trustworthy AI. Developed trust-aware domain adaptation, temporal reasoning for static classifiers, uncertainty-aware kernel methods for tensor data, and graph-based self-regularization to align feature, prediction, and structural representations.

TIME Lab, Australian National University, Canberra, Australia Nov. 2024 - Mar. 2025
Research Assistant to Dr. Lei Wang
Focused on advancing video understanding through large language models, with work spanning temporal reasoning, anomaly detection, and action recognition. Explored methods to capture long-range dependencies, improve interpretability, and enhance generalization in dynamic, open-world video tasks.

Qingdao Aerospace Power Research Institute, Qingdao, China Nov. 2023 - Feb. 2024
Research Intern, Computing Department
Contributed to a Digital Twin project by developing interactive web interfaces and simulation models integrating sensor data for real-time monitoring, predictive maintenance, and data-driven optimization of the institute system.

RESEARCH PROJECTS

TIME Space Feb 2025 - Nov. 2025
Client of The TechLauncher Project, ANU
Developed an interactive web platform for TIME Lab's research showcase, featuring ML-based feature extraction and embedding-driven retrieval for automated image tagging, clustering, and semantic search across temporal, spatial, and identity dimensions. Delivered a scalable, data-driven system through full-stack development and cloud deployment.

Active Vision July 2024 - June. 2025
Leader of The TechLauncher Project, ANU
Developed a machine learning-powered computer vision system for real-time tennis swing analysis. High-speed cameras capture motion data, which is processed to extract key performance indicators such as swing speed, angle. The system provides instant feedback via an intuitive interface, aiding performance assessment and technique refinement.

Image Embedding Explorer Aug. 2024 - Nov. 2024
Student of The Advanced Deep Learning Course Project, ANU
Built an interactive tool for visualizing high-dimensional image embeddings using projection pursuit. Enables intuitive exploration of embedding structures, linking each data point to its original image for enhanced interpretability in advanced deep learning models, such as CLIP and DINO.

EXTRACURRICULAR ACTIVITIES

Invited Speaker, Data61/CSIRO ICVG Reading Group Jul. 2025
Delivered an academic talk titled "Echoes in the Model: When Features Reflect Predictions," hosted by Data61/CSIRO, Canberra, Australia. Shared research insights with international scholars, facilitated discussion on interpretability in machine learning, and contributed to cross-institutional academic exchange.

Workshop Coordinator, The Web Conference (WWW) 2025 Nov. 2024 - Apr. 2025
Coordinated the TIME 2025 workshop at the WWW 2025. Organized speaker invitations, managed paper reviews, and facilitated discussions in cross-domain knowledge exchange and methodological innovation in web technologies.

AWARDS & HONORS

NeurIPS 2025 Scholar Award, NeurIPS 2025 Oct 11, 2025
Best Paper Award, The Web Conference (WWW 2025) Apr 29, 2025
TIME 2025 Service Medal, TIME Lab May 1, 2025
Outstanding Academic Achievements Scholarship, University of Colorado Denver Dec 1, 2021