

WENHAO WANG

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Anticipated graduation date: Mar. 2026 · 📞 +61 0437600635 / +86 18602459215

EB1A I-140 (Alien of Extraordinary Ability) approved in Mar. 2024, currently awaiting visa availability

🎓 EDUCATION

University of Technology Sydney, Sydney, Australia Sep. 2022 – Present

Ph.D. student in Australian Artificial Intelligence Institute, Faculty of Engineering and Information Technology, advised by Prof. Yi Yang, collaborated with Dr. Yifan Sun (WeChat) and Dr. Zongxin Yang (Harvard).

Beihang University, Beijing, China Sep. 2017 – Jul. 2021

Bachelor's Degree in Statistics; Rank 1/70; Graduated with *Shenyuan Medal* (Top 10 Undergraduate).

👨‍🔬 RESEARCH EXPERIENCE

Google DeepMind and Google Research Aug. 2025 – Dec. 2025

Student Researcher Manager: Longqi Cai, Taihong Xiao, Yuxiao Wang, Peike Li, Ming-Hsuan Yang

Baidu Research Feb. 2022 – Sep. 2022

Research Assistant Manager: Yifan Sun, Yi Yang

Inception Institute of Artificial Intelligence Jan. 2020 – Mar. 2021

Research Intern Manager: Fang Zhao, Shengcai Liao

🏆 ACADEMIC COMPETITIONS

1st Place in NeurIPS 2021 Facebook AI Image Similarity Challenge (Matching), Prize \$50,000 Nov. 2021

1st Place in CVPR 2022 FGVC9: eBay eProduct Visual Search Challenge Jun. 2022

1st Place in CVPR 2021 The 3rd Large-scale Video Object Segmentation Challenge Jun. 2021

2nd Place in CVPR 2023 Meta AI Video Similarity Challenge (Matching), Prize \$15,000 Jun. 2023

2nd Place in CVPR 2023 Meta AI Video Similarity Challenge (Descriptor), Prize \$15,000 Jun. 2023

3rd Place in NeurIPS 2021 Facebook AI Image Similarity Challenge (Descriptor), Prize \$20,000 Nov. 2021

📖 FEATURED RESEARCH

Scaling Laws for Deepfake Detection @ Google DeepMind. We observe that the detection error follows a *power-law decay* as the number of *real domains* or *deepfake methods* increases, similar to the scaling behaviors observed in Large Language Models (LLMs) by **OpenAI**. The paper is available at OpenReview.

Identity-preserving Stylized Face Generation @ Google DeepMind. No Google commercial model can generate *stylized faces* while *preserving identity* (not even Nano Banana). We support over **60** artistic styles (e.g., Ghibli, Sketch, Claymation) to stylize faces, with strong identity preservation. The project is in progress.

📖 SELECTED PAPERS

Video Generation + User. *Building three large-scale datasets to improve video generation models by better aligning them with user needs and intent.*

1. **Wenhao Wang**, Yi Yang. *VideoUFO: A Million-Scale User-Focused Dataset for Text-to-Video Generation*, in Conference on Neural Information Processing Systems (**NeurIPS**), 2025.
2. **Wenhao Wang**, Yi Yang. *TIP-I2V: A Million-Scale Real Text and Image Prompt Dataset for Image-to-Video Generation*, in International Conference on Computer Vision (**ICCV**), 2025.
3. **Wenhao Wang**, Yi Yang. *VidProM: A Million-scale Real Prompt-Gallery Dataset for Text-to-Video Diffusion Models*, in Conference on Neural Information Processing Systems (**NeurIPS**), 2024.

Diffusion Models + Provenance. *Developing provenance methods for diffusion models to trace the origin of generated images and evaluate their similarity to pre-existing images.*

1. **Wenhao Wang**, Yifan Sun, Zongxin Yang, Zhentao Tan, Zhengdong Hu, Yi Yang. *Origin Identification for Text-Guided Image-to-Image Diffusion Models*, in International Conference on Machine Learning (ICML), 2025.
2. **Wenhao Wang**, Yifan Sun, Zhentao Tan, Yi Yang. *Image Copy Detection for Diffusion Models*, in Conference on Neural Information Processing Systems (NeurIPS), 2024.
3. **Wenhao Wang**, Yifan Sun, Zongxin Yang, Zhentao Tan, Yi Yang. *Towards Diffusion-based Image Variation Detection*, **IJCV Major Revision**, 2025.
4. **Wenhao Wang**, Yifan Sun, Zongxin Yang, Zhengdong Hu, Zhentao Tan, Yi Yang. *Replication in Visual Diffusion Models: A Survey and Outlook*, **TPAMI Under Review**, 2025.

Image Copy Detection. *Designing image copy detection systems that can efficiently adapt to novel tampering patterns and avoid interference from hard negatives.*

1. **Wenhao Wang**, Yifan Sun, Yi Yang. *Pattern-Expandable Image Copy Detection*, in International Journal of Computer Vision (IJCV), 2024.
2. **Wenhao Wang**, Yifan Sun, Yi Yang. *A Benchmark and Asymmetrical-similarity Learning for Practical Image Copy Detection*, in AAAI Conference on Artificial Intelligence (AAAI), **Oral**, 2023.
3. **Wenhao Wang**, Yifan Sun, Zhentao Tan, Yi Yang. *AnyPattern: Towards In-context Image Copy Detection*, **IJCV Major Revision**, 2025.

Fundamental Computer Vision. *Conducting research on fundamental computer vision tasks, such as image classification, image retrieval, and object detection.*

1. **Wenhao Wang**, Yifan Sun, Wei Li, Yi Yang. *TransHP: Image Classification with Hierarchical Prompting*, in Neural Information Processing Systems (NeurIPS), 2023.
2. **Wenhao Wang**, Fang Zhao, Shengcai Liao, Ling Shao. *Attentive Waveblock: Complementarity-enhanced Mutual Networks for Unsupervised Domain Adaptation in Person Re-identification and Beyond*, in IEEE Transactions on Image Processing (TIP), 2022.
3. **Wenhao Wang**, Shengcai Liao, Fang Zhao, Cuicui Kang, Ling Shao. *Domainmix: Learning Generalizable Person Re-identification without Human Annotations*, in British Machine Vision Conference (BMVC), 2021.
4. **Wenhao Wang**. *Detection of Panoramic Vision Pedestrian Based on Deep Learning*, in Image and Vision Computing (IVC), 2020.

REVIEWER ACTIVITIES

Wenhao Wang has been invited for reviewing more than **100** papers submitted to top journals and conferences: **Journal Reviewer** of Transactions on Pattern Analysis and Machine Intelligence, International Journal of Computer Vision, Transactions on Image Processing, Transactions on Circuits and Systems for Video Technology, Knowledge-Based Systems, Transactions on Intelligent Transportation Systems, IEEE/CAA Journal of Automatica Sinica, Transactions on Big Data, Transactions on Artificial Intelligence, Journal of Visual Communication and Image Representation, Neurocomputing, and Neural Networks.

Conference Reviewer of International Conference on Learning Representations, International Conference on Machine Learning, Conference on Neural Information Processing Systems, International Conference on Computer Vision, Conference on Computer Vision and Pattern Recognition, European Conference on Computer Vision, AAAI Conference on Artificial Intelligence, and ACM Multimedia.

RESEARCH FUNDING

1. OpenAI Researcher Access Program, from *OpenAI*, worth \$5,000.
2. Google for Startups Cloud Program, from *Google*, worth \$250,000.
3. NeurIPS 2024 Scholar Award, from *NeurIPS*, covering full registration and 6 nights hotel stay.
4. International Research Scholarship, from *University of Technology Sydney*, covering tuition fees.
5. FEIT Scholarship, from *University of Technology Sydney*, A\$37,000 per year.
6. Vice Chancellor's Conference Fund, from *University of Technology Sydney*, A\$3,000.