Yao **Ni**

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Research Interests: Generative Models, Generalization Theory, Parameter-Efficient Fine-Tuning, Long-tailed Learning, Large Language Models.

Education

ANU (The Australian National University) *Oct. 2020 — Now*

- PhD of the College of Engineering, Computing and Cybernetics
- Supervisors: Prof. Piotr Koniusz, Prof. Liang Zheng, Prof. Richard Hartley

BIT (Beijing Institute of Technology) *Sept. 2016 — Jul. 2019*

- Master of the School of Computer Science and Technology
- GPA: 85.88/100 (Top 10%) | Supervisor: Prof. Dandan Song

BIT (Beijing Institute of Technology) *Sept. 2012 — Jul. 2016*

- Bachelor of the School of Computer Science and Technology
- GPA: 85.95/100 (Top 10%)

Publications

PACE: marrying generalization in PArameter-efficient fine-tuning with Consistency rEgularization
Yao Ni, Shan Zhang, Piotr Koniusz *NeurIPS 2024 (**Spotlight**)*
Perturbing adapters then enforcing consistency reduces gradient norm and prevents model from forgetting pretrained knowledge.

CHAIN: Enhancing Generalization in Data-Efficient GANs via lips*CH*itz continuity constr*AI*ned *N*ormalization
Yao Ni, Piotr Koniusz *CVPR 2024*
A refined Batch Normalization for improving the generalization of GAN by reducing the gradient norm of discriminator weight.

Semantic Transfer from Head to Tail: Enlarging Tail Margin for Long-Tailed Visual Recognition
Shan Zhang*, **Yao Ni***, Jinhao Du, Yanxia Liu, Piotr Koniusz *WACV 2024*
A feature augmentation technique transfers diversity from head to tail classes, implicitly enlarging the margin of tail classes.

NICE: NoIse-modulated Consistency rEgularization for Data-Efficient GANs
Yao Ni, Piotr Koniusz *NeurIPS 2023*
An approach lowers discriminator overfitting and stabilizes training by implicitly reducing discriminator complexity & gradient.

Manifold Learning Benefits GANs
Yao Ni, Piotr Koniusz, Richard Hartley, Richard Nock *CVPR 2022*
An approach curbes GAN overfitting using manifold coding, striking a balance between quantization and coordinate coding.

CAGAN: Consistent Adversarial Training Enhanced GANs
Yao Ni, Dandan Song, Xi Zhang, Hao Wu, Lejian Liao *IJCAI 2018*
A method boosts GAN stability using multiple discriminators via Dropout and introduces adversarial consistency.

A Joint Deep Model of Entities and Documents for Cumulative Citation Recommendation
Lerong Ma, Dandan Song, Lejian Liao, **Yao Ni** *ClusterComputing 2017*
A joint training model with CNN and Word2Vec to match the related documents in Wikipedia to the given name entities.

Professional Activities

Reviewer: Pattern Recognition 2021, CVPR 2022, ICML 2022, ECCV 2022, NeurIPS 2022, CVPR 2023, ICML 2023, ICCV 2023, NeurIPS 2023, TPAMI 2023, ICLR 2024, CVPR 2024, ICML 2024, ECCV 2024, NeurIPS 2024, IJCV 2025, TMLR 2025, Multimodal Algorithmic Reasoning at NeurIPS 2024, Vision Datasets Understanding at CVPR 2022-2024.

Teaching Assistant: Introduction to Machine Learning (COMP 3670, Semester 2, 2022), *CECC, ANU.*

Talk: CAGAN: Consistent Adversarial Training Enhanced GANs. *Baidu & CIPS, June 2018*

Internships

Research Intern Mitsubishi Electric Research Laboratories, *Boston, United States* *Jul. 2024 – Now*

- Stable Diffusion, 3D Physics Engine.

Research Intern Tencent AI Lab, *Shenzheng, China* *Aug. 2021 – Dec. 2021*

- Conducted research on Key-point detection for unseen data where we transfer knowledge of human pose estimation across different domains.

Software Development Intern Beijing Xingtutong Technology, *Beijing, China* *Dec. 2015 – Sept. 2016*

- Developed an Android application that interacts with smart bracelets through Bluetooth and displays personal health information on smartphone.

Software Development Intern Tomorrow Advanced Life (TAL), *Beijing, China* *Jul. 2015 – Oct. 2015*

- Contributed several functionalities to a live streaming education platform. Features include video recording, video storage, video frame correction and live streaming distribution.

Honors & Awards

- Excellent Master Thesis *(6 out of 200+ master's thesis are selected to be excellent)* *2019*
- Outstanding Graduate Award *(Awarded to Top 10% graduates)* *2019*
- Chinese National Scholarship *(Top 3%, the highest-level scholarship in China)* *2018*
- Outstanding Graduate Student Award *(Top 10%)* *2018*
- Excellent Graduate/Undergraduate Student Scholarship *(First-/Second-Class)* *2013-2018*
- Huaruishiji Programming Competition *(Third-Class)* *2014*

Skills

Programming skills: Python, PyTorch, Tensorflow, JAVA, LaTeX, C, C++
Languages: Chinese, English (TOEFL iBT: 99, GRE: 320+3.5)