

EDUCATION

Miami University - Oxford, Ohio

Bachelor of Science, Data Science and Statistics

Bachelor of Arts, Economics

Honors: Cum Laude

2019 - 2024

GPA: 3.83/4.0

PUBLICATIONS

Conference Publications

* - equal contribution

6. **Anti-I2V: Safeguarding your photos from malicious image-to-video generation.**

Duc Vu, Anh Nguyen, Chi Tran and Anh Tran.

Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026.

5. **InverFill: One-Step Inversion for Enhanced Few-Step Diffusion Inpainting.**

Duc Vu*, Kien Nguyen*, Trong-Tung Nguyen*, Ngan Nguyen*, Phong Nguyen, Khoi Nguyen, Cuong Pham and Anh Tran.

Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026.

4. **Cross-Space Distillation: Teaching One-Step Students with Modern Diffusion Teachers.**

Anh Nguyen*, Ngan Nguyen*, Duc Vu*, Trung Tuan Dao, Viet Nguyen, Quan Dao, Kien Nguyen, Chi Tran, Phong Nguyen, Khoi Nguyen, Cuong Pham, Dimitris N. Metaxas, Vishal M. Patel, and Anh Tran.

European Conference on Computer Vision (ECCV), 2026.

3. **Improved Training Technique for Shortcut Models.**

Anh Nguyen*, Viet Nguyen*, Duc Vu, Trung Tuan Dao, Chi Tran, Toan Tran and Anh Tran.

Advances in Neural Information Processing Systems (NeurIPS), 2025.

2. **EFHQ: Multi-purpose ExtremePose-Face-HQ dataset.**

Trung Tuan Dao*, Duc Vu*, Cuong Pham, Anh Tran.

Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024.

1. **SwiftBrush v2: Make Your One-step Diffusion Model Better Than Its Teacher.**

Trung Tuan Dao, Thuan Hoang Nguyen*, Thanh Le*, Duc Vu*, Khoi Nguyen, Cuong Pham and Anh Tran.

European Conference on Computer Vision (ECCV), 2024.

Preprints

* - equal contribution

1. **VideoDrift: Plug-and-Play Video Refinement for Diffusion Models via KV-Anchored Attention.**

Ngan Nguyen, Duc Vu, Trong-Tung Nguyen, Phuc Lai, Cuong Pham and Anh Tran.

Under Review, 2026.

WORK EXPERIENCE

Qualcomm AI Research

AI Research Resident

Advisors: Dr. Anh Tran

March, 2025 - Current

Hanoi, Vietnam

- Introduced an image cloaking framework that effectively protects user images from malicious use across diverse image-to-video models, including both UNet- and DiT-based architectures.
- Devised architectural refinements and training strategies that improved Shortcut models, achieving FID 5.27 and 2.05 on ImageNet 256×256 with one and four sampling steps, respectively.
- Introduced a one-step diffusion inversion network that enables high-quality, few-step image inpainting with only 0.07 s of additional overhead.
- Developed a one-step frame-wise enhancement module that boosts video fidelity and delivers $2.8 \times - 4.7 \times$ faster end-to-end performance compared to previous methods.

VinAI Research

AI Research Resident

Advisors: Dr. Anh Tran

March, 2022 - March, 2025

Hanoi, Vietnam

- Engineered a dataset of 30,000 augmented infrared facial images using a 3D Morphable Model, boosting driver facial landmark detection accuracy by 15% for driver monitoring system (DMS).

- Established a benchmark dataset of 450,000 frames for extreme head poses, cutting error rates by 10-20% for the then-current state-of-the-art face generation and reenactment techniques.
- Introduced a fused one-step diffusion model by combining two efficient training strategies and a novel CLIP loss, resulting in a then-current state-of-the-art Fréchet Inception Score of 8.14.

PIXTA Co. Ltd

December, 2020 - July, 2021

Data Scientist Intern

Hanoi, Vietnam

- Synthesized stock-quality images with StyleGAN2 and experimented with super-resolution methods, generating more than 2000 stock-quality images.
- Designed a face detection model on image patches specialized for high-resolution images, improving reviewing speed by around 30% and publishing time by 50% (from 7 days to 4 days).
- Deployed and evaluated a multi-task model that helped enhance customer experience, cleaned around 4 million unlabeled images (5% of total images), and re-categorized age and emotion groups of 13.5 million stock images.

SELECTED AWARDS AND HONORS

- Scholar Leaders - Miami University, Oxford *2022-2023*
- President's List - Miami University, Oxford *Fall 2019-20, Spring 2022-23*
- Dean's List - Miami University, Oxford *Spring 2019-20, Spring 2021-22, Fall 2022-23, Fall 2023-24*

PROFESSIONAL RESPONSIBILITIES

- *Reviewer:* ECCV (2026), CVPR (2026), CVPRW (2025), ACCV (2025).

REFERENCES

Dr. Anh Tran

*Principal Research Engineer, Qualcomm AI Research, Vietnam
anhtra@qti.qualcomm.com*

Assoc. Prof. Cuong Pham

*Dean, Faculty of Artificial Intelligence, Posts and Telecommunications Institute of Technology (PTIT), Vietnam
Director, PTIT.AI Research Lab, Posts and Telecommunications Institute of Technology (PTIT), Vietnam
Visiting Research Scientist, Qualcomm AI Research, Vietnam
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Dr. Phong Nguyen

*Senior Research Engineer, Qualcomm AI Research, Vietnam
phongnh@qti.qualcomm.com*