

Khoi Duc Nguyen

PhD Student in Computer Science, University of Wisconsin-Madison
kdnnguyen7@wisc.edu | <https://khoiucd.github.io/> | github.com/khoiucd

Research interests

MLLM, VLM inference efficiency; post-training.

Education

University of Wisconsin-Madison

PhD in Computer Science, advised by Professor Yin Li

Madison, US

Sep 2023 – Present

Ho Chi Minh City University of Technology (HCMUT)

B.Eng in Computer Engineering

Ho Chi Minh, Vietnam

Sep 2017 – Dec 2021

Publications

[1] AdaLLaVA: Learning to Inference Adaptively for Multimodal Large Language Models
Zhuoyan Xu*, **Khoi Duc Nguyen***, Preeti Mukherjee, Somali Chaterji, Saurabh Bagchi, Yingyu Liang, and Yin Li
In *International Conference on Computer Vision (ICCV)*, 2025.

[2] PAVE: Patching and Adapting Video Large Language Models
Zhuoming Liu, Yiquan Li, **Khoi Duc Nguyen**, Yiwu Zhong, Yin Li
In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025.

[3] Adainf: Adaptive inference for resource-constrained foundation models
Zhuoyan Xu, **Khoi Duc Nguyen**, Preeti Mukherjee, Somali Chaterji, Yingyu Liang, Yin Li
In *Workshop on Efficient Systems for Foundation Models II @ ICML2024*.

[4] ESCAPE: Encoding Super-keypoints for Category-Agnostic Pose Estimation
Khoi Duc Nguyen, Chen Li, Gim Hee Lee
In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

[5] Inductive and Transductive Few-Shot Video Classification via Appearance and Temporal Alignments
Khoi Duc Nguyen, Quoc-Huy Tran, Khoi Nguyen, Binh-Son Hua, Rang Nguyen
In *European Conference on Computer Vision (ECCV)*, 2022.

[6] POODLE: Improving Few-shot Learning via Penalizing Out-of-Distribution Samples
Duong H. Le*, **Khoi Duc Nguyen***, Khoi Nguyen, Quoc-Huy Tran, Rang Nguyen, Binh-Son Hua
In *Proc. 35th Conference on Neural Information Processing Systems (NeurIPS)*, 2021.

Experience

University of Wisconsin-Madison

Graduate assistant

Madison, USA

Jan 2024 - Present

Research project: Efficient multimodal language models.

- Contributed to AdaLLaVA (ICCV 2025), an adaptive framework that allows multimodal language models to be deployed on different resource-constrained platforms.

Meta

Computer Science Research Intern

Menlo Park, USA

May 2026 - Aug 2026

Research project: VLMs/MLLMs post-training.

Dolby Laboratories

PhD Research Intern

Sunnyvale, USA

May 2025 - Aug 2025

Research project: Vector graphics animation.

- Proposed a novel neural representation for vector graphics animation, achieving high temporal consistency.
- Developed method for text-to-vector animation using pixel-based image and video diffusion models.

SilverAI

AI Engineer

Hanoi, Vietnam

May 2024 - Aug 2024

- Developed face detection and hairstyle-changing features using generative models and classic computer vision, deployed in production (SnapEdit, available in App Store and Google Play).

National University of Singapore

AI Research Intern

Singapore

Jun 2022 - May 2023

Research project: Few-shot pose estimation.

Advisor: Dr. Chen Li, Prof. Gim Hee Lee.

- Proposed ESCAPE (CVPR 2024), a Bayesian framework that learns structural priors from base data and transfers them for unseen keypoint detection.

Qualcomm AI Research (formerly VinAI Research)

AI Research Resident

Ho Chi Minh, Vietnam

Nov 2020 - Jun 2022

Research projects: Few-shot image classification and action recognition.

Advisors: Dr. Rang Nguyen, Dr. Quoc-Huy Tran, Prof. Binh-Son Hua.

- Proposed ATA (ECCV 2022), the first inductive and transductive method for few-shot action recognition by aligning appearance and temporal information.
- Contributed to POODLE (Neurips 2021), a method that improves few-shot image classification by leveraging out-of-distribution data.

Technical Skills

Programming: Python, C/C++, MATLAB

Misc: Pytorch, JAX, OpenCV, NumPy, Git, \LaTeX , Markdown, Slurm

OS: Linux, macOS, Windows

Awards

Third Prize in the final round of Digital Race, FPT.	2020
Scholarships for outstanding academic achievements, HCMUT.	2018, 2019, 2021
Valedictorian of the 2017 intake, highest score in university entrance exam, HCMUT.	2017
Gold Medal in Vietnam Southern Regional Olympiad in Mathematics.	2016

Services

Conference Reviewer: ICCV (2025), CVPR (2026, 2025, 2023), ECCV (2024), NeurIPS (2025, 2023)