

Yusen Peng

✉ peng.1007@osu.edu <https://yusen-peng.github.io>

Education

The Ohio State University

August 2026 – Present

PhD in Computer Science and Engineering

- Advisor: Prof. Sachin Kumar
- Research interest: training and inference efficiency in multimodal LLMs
- Ongoing project: dynamic image tokenization for efficient MLLMs (e.g., LLaVA, QwenVL)
- \$34,764 University Graduate Fellowship

The Ohio State University

August 2022 – May 2026

B.S. in Computer Science and Engineering (GPA: 3.993/4.0)

- Honorable Mention for CRA Outstanding Undergraduate Researcher Award
- \$2,200 Undergraduate Research Scholarship

Publications

Dynamic Image Tokenization for Efficient VLMs

Yusen Peng, Tejas Naik, Valentin Hofmann, Yuki M Asano, and Sachin Kumar

accepted to COLM 2026 tokenization workshop; ongoing work

Domains: Tokenization, Efficiency, Multimodal LLMs

CascadeFormer: A Family of Two-stage Cascading Transformers for Skeleton-based Human Action Recognition

Yusen Peng, Alper Yilmaz

accepted at 28th International Conference on Pattern Recognition (ICPR), 2026

Domains: Action Recognition; Transformer-based Architecture

<https://arxiv.org/pdf/2509.00692>

CE-Bench: Towards a Reliable Contrastive Evaluation Benchmark of Interpretability of Sparse Autoencoders

Alex Gulko*, Yusen Peng*, Sachin Kumar

Proceedings of the 8th BlackboxNLP Workshop at EMNLP 2025

Domains: Mechanistic Interpretability; Datasets & Benchmarks

<https://aclanthology.org/2025.blackboxnlp-1.1>

Submissions Under Review

TSB-FCST: A Billion-Scale Time-Series Forecasting Benchmark with Taxonomy-Specific Evaluation

Fan Yang, Yusen Peng, and John Paparrizos

under review (SIGMOD 2027)

Domains: Time Series Forecasting; Datasets and Benchmarks

SVD^3 : Singular Value Decomposition for Visual Geometry Model Compression

Yusen Peng, Haoxuan Wang, Jiachen Tao, Yan Yan

under review (ACCV 2026)

Domains: Low-rank Approximation (SVD); 3D Vision

pytskit: A Comprehensive Time Series Toolkit

John Paparrizos, Fan Yang, Yusen Peng, Tomasz Frelek, Frank Li, Qiao Xiao, and Mark Kikta

under review (JMLR)

Domains: Time Series Analysis; Open-source ML Software

Lower-quality public housing corresponds to elevated flood risk and social disadvantage

Woi Sok Oh, Kelsea Best, Meri Davlasheridze, Yusen Peng.

under review (Natural Hazards)

Domains: Regression Modeling; Data Analytics