Jinhong Lin

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EDUCATION

Department of Electrical and Computer Engineering, UW-Madison

GPA: 4.0/4.0

Research Master in Electrical and Computer Engineering

May 2025 (Expected)

Mentor: Prof. Pedro Morgado

Department of Computer Science, UW-Madison

GPA:3.97/4.0

Bachelor of Science in Computer Science

May 2023

PUBLICATIONS

Accelerating Augmentation Invariance Pretraining

Neural Information Processing Systems (NeurIPS) 2024

Jinhong Lin, Cheng-En Wu, Yibing Wei, Pedro Morgado

- Proposed a self-supervised learning acceleration framework for Vision Transformers (ViTs), utilizing randomized token dropout and flexible patch scaling to effectively reduce the training budget.
- Proposed a gradient-based method for dynamic dropout and patch size selection during training, achieving 4× speedup on ImageNet across frameworks like SimCLR, MoCo, and DINO.

Patch Ranking: Token Pruning as Ranking Prediction for Efficient CLIP Inference

IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) 2025

Cheng-En Wu*, Jinhong Lin*, Yibing Wei, Pedro Morgado

- Proposed the "Golden Ranking" framework to rank tokens in CLIP's Vision Transformer by relevance, confidence, and minimal impact, reducing computation by up to 40% with minimal accuracy loss.
- Proposed a lightweight, cross-domain transferable predictor to approximate the Golden Ranking, enabling real-time token pruning while preserving model performance during inference.

APPOINTMENTS

Head Teaching Assistant Jan 2024 - Present

ECE 539 - Introduction to Artificial Neural Networks

University of Wisconsin-Madison

Research Assistant Jan - Aug 2024

Mentor: Prof. Pedro Morgado University of Wisconsin-Madison

Teaching Assistant Sep 2023 - Jan 2024

ECE 539 - Introduction to Artificial Neural Networks

University of Wisconsin-Madison

Undergraduate Teaching Assistant Jan 2023 - May 2022

ECE 540 - Intro to Artificial Intelligence University of Wisconsin-Madison

TECHNICAL SKILLS

Languages: Python, Java, C/C++, Julia, Shell, Mathematica, C/C++, MATLAB, R Libraries: Pandas, NumPy, Matplotlib, PyTorch, Scikit-learn, OpenCV, SciPy, Seaborn

^{*} Denotes equal contribution