Soroush Abbasi Koohpayegani

soroush@ucdavis.edu soroush@umbc.edu

Webpage Google Scholar (+1) 240-840-6824

Education

BSc. • Computer Science
Iran • Sharif University of Technology
(2013 Sep - 2018 Feb)

MSc. • Computer Science
USA • University of Maryland, Baltimore County
(2019 Aug - 2022 Aug)

Ph.D • Computer Science
USA • University of California, Davis
(2022 Sep - Present)
Expected Graduation Date: Summer 2024

Language

- Persian (Native)
- English

Research Interest

- Self-Supervised Learning
- Efficient AI Models
- Multimodal AI
- Diffusion Models
- Radiance Field Modeling

Experience

University of California, Davis
Computer Vision Research Assistant
(2022 Sep - Present)

Apple
Computer Vision Research Internship
Summer 2022

University of Maryland, Baltimore County
Computer Vision Research/Teaching Assistant
(2019 Aug - 2022 May)

Microsoft
Computer Vision Research Internship
Summer 2021

Microsoft

Publications:

NOLA: Networks as Linear Combination of Low Rank Random Basis
Soroush Abbasi Koohpayegani*, KL Navaneet*, Parsa Nooralinejad, Soheil Kolouri, Hamed Pirsiavash
*equal contribution
ICLR 2024

PRANC: Pseudo Random Networks for Compacting deep models
Parsa Nooralinejad, Ali Abbasi, Soroush Abbasi Koohpayegani*, Kossar Pourahmadi Meibodi*,
Rana Muhammad Shahroz Khan*, Soheil Kolouri, Hamed Pirsiavash *equal contribution
ICCV 2023

ATS: Adaptive Token Sampling for Efficient Vision Transformers
Mohsen Fayyaz*, Soroush Abbasi Koohpayegani*, Farnoush Rezaei Jafari*, Sunando Sengupta,
Hamid Reza Vaezi Joze, Eric Sommerlade, Hamed Pirsiavash, Juergen Gall *equal contribution
*ECCV 2022 (**Oral presentation**)*

Constrained Mean Shift Using Distant Yet Related Neighbors for Representation Learning
Ajinkya Tejankar*, Soroush Abbasi Koohpayegani*, KL Navaneet*,
Kossar Pourahmadi, Akshayvarun Subramanya, Hamed Pirsiavash *equal contribution
ECCV 2022

Consistent Explanations by Contrastive Learning
Vipin Pillai, Soroush Abbasi Koohpayegani, Ashley Ouligian, Dennis Fong, Hamed Pirsiavash
CVPR 2022

Backdoor Attacks on Self-Supervised Learning
Aniruddha Saha, Ajinkya Tejankar, Soroush Abbasi Koohpayegani, Hamed Pirsiavash
*CVPR 2022 (**Oral presentation**)*

ISD: Self-Supervised Learning by Iterative Similarity Distillation
Ajinkya Tejankar*, Soroush Abbasi Koohpayegani*, Vipin Pillai, Paolo Favaro, Hamed Pirsiavash
*equal contribution
ICCV 2021

Mean Shift for Self-Supervised Learning
Soroush Abbasi Koohpayegani*, Ajinkya Tejankar*, Hamed Pirsiavash
*equal contribution
*ICCV 2021 (**Oral presentation**)*.

SimReg: Regression as a Simple Yet Effective Tool for Self-supervised Knowledge Distillation
KL Navaneet, Soroush Abbasi Koohpayegani, Ajinkya Tejankar, Hamed Pirsiavash
BMVC 2021

CompRess: Self-Supervised Learning by Compressing Representations
Soroush Abbasi Koohpayegani*, Ajinkya Tejankar*, Hamed Pirsiavash
*equal contribution
NeurIPS 2020

Publications:

SlowFormer: Universal Adversarial Patch for Attack on Compute and Energy Efficiency of Inference Efficient Vision Transformers
KL Navaneet*, Soroush Abbasi Koohpayegani*, Essam Sleiman*, Hamed Pirsiavash
*equal contribution
arXiv 2023

GeNIe: Generative Hard Negative Images Through Diffusion
Soroush Abbasi Koohpayegani, Anuj Singh, K L Navaneet, Hadi Jamali-Rad, Hamed Pirsiavash
arXiv 2023

Compact3D: Compressing Gaussian Splat Radiance Field Models with Vector Quantization
KL Navaneet*, Kossar Pourahmadi Meibodi*, Soroush Abbasi Koohpayegani, Hamed Pirsiavash
*equal contribution
arXiv 2023

SimA: Simple Softmax-free Attention for Vision Transformers
Soroush Abbasi Koohpayegani, Hamed Pirsiavash
WACV 2024

A Closer Look at Robustness of Vision Transformers to Backdoor Attacks
Akshayvarun Subramanya, Soroush Abbasi Koohpayegani*, Aniruddha Saha*,
Ajinkya Tejankar, Hamed Pirsiavash *equal contribution
WACV 2024

Multi-Agent Lifelong Implicit Neural Learning
Soheil Kolouri, Ali Abbasi, Soroush Abbasi Koohpayegani, Parsa Nooralinejad, Hamed Pirsiavash
IEEE Signal Processing Letters