

Sharath Girish

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EDUCATION

University of Maryland, College Park

August 2019 - Present

PhD. in Computer Science

GPA: 4.0/4.0

Advisor: Prof. Abhinav Shrivastava

Indian Institute of Technology Madras, India

August 2015 - May 2019

B.Tech. in Electrical Engineering

GPA: 9.04/10

RESEARCH INTERESTS

My research has been involved in efficiency and compression of deep networks and data (images/videos). I am also interested in developing compact 3D representations of static/dynamic scenes.

PUBLICATIONS

QUEEN: QUantized Efficient ENcoding for Streaming Free-viewpoint Videos

Sharath Girish, Tianye Li, Amrita Mazumdar, Abhinav Shrivastava, David Luebke, Shalini De Mello
Under review

EAGLES: Efficient Accelerated 3D Gaussians with Lightweight Encodings

Sharath Girish, Kamal Gupta, Abhinav Shrivastava
Under review

SHACIRA - Scalable HAsH-grid Compression for Implicit Neural Representations

Sharath Girish, Abhinav Shrivastava, Kamal Gupta
IEEE International Conference on Computer Vision (ICCV), 2023

NIRVANA: Neural Implicit Representations of Videos with Adaptive Networks and Autoregressive Patch-wise Modeling

Shishira R Maiya*, *Sharath Girish**, Max Ehrlich, Hanyu Wang, Kwot Sin Lee, Patrick Poirson, Pengxiang Wu, Chen Wang, Abhinav Shrivastava
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023

LilNetX: Lightweight Networks with EXtreme Model Compression and Structured Sparsification

Sharath Girish, Kamal Gupta, Saurabh Singh, Abhinav Shrivastava
International Conference on Learning Representations (ICLR), 2023

Moving Beyond Handcrafted Architectures in Self-Supervised Learning

Sharath Girish, Debadeepta Dey, Neel Joshi, Vibhav Vineet, Shital Shah, Caio Cesar Teodoro Mendes, Abhinav Shrivastava, Yale Song
Under review

Towards Discovery and Attribution of Open-world GAN Generated Images

*Sharath Girish**, Saksham Suri*, Saketh Rambhatla, Abhinav Shrivastava
IEEE International Conference on Computer Vision (ICCV), 2021

The Lottery Ticket Hypothesis for Object Recognition

*Sharath Girish**, Shishira R Maiya*, Kamal Gupta, Hao Chen, Larry Davis, Abhinav Shrivastava
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021

A Unified Learning-Based Framework for Light Field Reconstruction From Coded Projections

Anil Kumar Vadathya, *Sharath Girish*, Kaushik Mitra
IEEE Transactions on Computational Imaging (TCI), 2019

Unconstrained Motion Deblurring for Dual-lens Cameras

Mahesh Mohan MR, *Sharath Girish*, AN Rajagopalan
Proceedings of the IEEE International Conference on Computer Vision (ICCV), 2019 (Oral)

*Equal contribution

A Deep Learning Framework for Light Field Reconstruction From Focus-Defocus Pair:

A minimal hardware approach

Anil Kumar Vadathya, *Sharath Girish*, Kaushik Mitra

Computational Cameras and Displays Workshop, Conference on Computer Vision and Pattern Recognition
CVPRW 2018

PROFESSIONAL EXPERIENCE

Research Intern, NVIDIA Research, AMRI Team

Jan 2024 - April 2024

Mentor - Shalini De Mello

Worked on streaming applications for Gaussian Splatting

Applied Scientist Intern, Amazon

May 2023 - August 2023

Mentor - Yifan Xing

Worked on Open-World Semi-Supervised Learning

Research Intern, Microsoft Research

May 2021 - August 2021

Mentor - Dr. Yale Song, Dr. Debadeepta Dey

Worked on application of Neural Architecture Search on Self Supervised Learning

Graduate Research Assistant, University of Maryland

May 2020 - Present

Mentor - Prof. Abhinav Shrivastava

Working on Open World Image Attribution and Model, Data Compression

Graduate Research Assistant, University of Maryland

August 2019 - May 2020

Mentor - Prof. Rama Chellappa

Worked on Activity Recognition by splitting models based on input video modalities or output activity types to improve performance.

PHD COURSEWORK

Algorithms in Machine Learning : Guarantees and Analyses, Deep Learning, Advanced Numerical Optimization, Statistical Pattern Recognition, Advanced Techniques in Visual Learning and Recognition

MISCELLANEOUS

- **Outstanding Graduate Assistant Award** - UMD AY 2023-24
- **Reviewer** - CVPR, ICCV, ECCV, ICLR, NeurIPS, WACV
- **Dean's Fellowship** awarded by the University of Maryland, 2019
- **All India Rank - 274** in JEE-Advanced 2015, taken by 1.3 million students (top 0.02%)
- Awarded **KVPY** scholarship in 2014 and the **NTSE** scholarship in 2013 by Government of India