# Vinu Sankar Sadasivan

III-year PhD Student
Department of Computer Science
The University of Maryland, College Park
Research Interests — AI/ML Security & Privacy, GenAI

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## **EDUCATION**

The University of Maryland, College Park

Ph.D. & M.S. in CS advised by Prof. Soheil Feizi

Aug '21 - Apr '26 (Expected)GPA - 4.00/4.00

Indian Institute of Technology, Gandhinagar

B. Tech. in CSE [ Director's Silver Medalist ]

Jul '16 – Jul '20 GPA - 9.21/10.00

# RESEARCH PAPERS

Can AI-Generated Text be Reliably Detected?

VS Sadasivan, A Kumar, S Balasubramanian, W Wang, S Feizi

Preprint on arXiv. March, 2023. [PDF]

Media Coverage: Washington Post, Wired, New Scientist, The Register, TechSpot

Exploring Geometry of Blind Spots in Vision Models

S Balasubramanian\*, G Sriramanan\*, VS Sadasivan, S Feizi

Accepted (spotlight) at Neural Information Processing Systems (NeurIPS), 2023.

Robustness of AI-Image Detectors: Fundamental Limits and Practical Attacks

M Saberi, VS Sadasivan, K Rezaei, A Kumar, A Chegini, W Wang, S Feizi

Preprint on arXiv. September, 2023. [PDF]

Media Coverage: Wired, The Register

Provable Robustness for Streaming Models with a Sliding Window

A Kumar, VS Sadasivan, S Feizi

Preprint on arXiv. March, 2023. [PDF]

CUDA: Convolution-based Unlearnable Datasets

VS Sadasivan, M Soltanolkotabi, S Feizi

Accepted at Computer Vision and Pattern Recognition Conference (CVPR), 2023. [PDF]

Statistical Measures For Defining Curriculum Scoring Function

VS Sadasivan, A Dasgupta

Accepted (spotlight) at SubSetML Workshop at International Conference on Machine Learning (ICML), 2021. [PDF]

Shallow RNN: Accurate Time-series Classification On Resource Constrained Device

D Dennis, DAE Acar, V Mandikal, VS Sadasivan, V Saligrama, HV Simhadri, P Jain

In Advances in Neural Information Processing Systems (NeurIPS), 2019. [PDF]

High Accuracy Patch-Level Classification Of Wireless Capsule Endoscopy Images Using A Convolutional Neural Network

VS Sadasivan, CS Seelamantula

In IEEE 16<sup>th</sup> International Symposium on Biomedical Imaging (IEEE ISBI), 2019. [PDF]

 $^{*}$  equal contribution

## RESEARCH EXPERIENCES

UMD, College Park

Research Assistant in CS

Aug '21 – Present Advisor: Prof. Soheil Feizi IIT Gandhinagar, India

Junior Research Fellow in CSE

California Institute of Technology, Pasadena

Undergraduate Research Fellow in Astronomy Department

Microsoft Research India, Bangalore

Research Intern in Machine Learning and Optimization Group

Indian Institute of Science (IISc), Bangalore

Research Intern at Spectrum Lab for Signal Processing

Aug '20 - Jul '21

Advisor: Prof. Anirban Dasgupta

 $May - Jul\ '19$  Advisor: Dr. Ashish Mahabal

Jan - Apr'19

Advisors: Dr. Harsha Simhadri  $\operatorname{\mathscr{C}}$  Dr. Prateek Jain

 $May - Jul '17, \ Dec '17, \ Feb '18, \ May - Jul '18$ 

Advisor: Prof. Chandra Seelamantula

# **AWARDS AND HONORS**

- Kulkarni Fellowship Awardee at University of Maryland in 2023.
- Notable reviewer top  $\sim 1\%$  reviewer in ICLR 2023.
- Director's Silver Medalist CSE, IIT Gandhinagar in 2020.
- Special mention for poster Undergraduate Research Conclave, IIT Gandhinagar in 2019.
- Summer Undergraduate Research Fellow Caltech in 2019 ( $\sim 6350$  USD).
- Kerala State Topper, Regional Mathematics Olympiad in 2014.
- KVPY awardee by Government of India in 2016. Ranked 85 out of  $\sim 100,000$ .
- NTSE scholar awarded by Government of India in 2012.

#### SERVICES & TEACHING

- I have served as a *reviewer* for prominent machine learning conferences such as ICML 2021, NeurIPS 2022, ICLR 2023 (Notable reviewer), NeurIPS 2023, ICML Neural Compression Workshop 2023.
- I have assisted in teaching (TA) CMSC 422: Introduction to Machine Learning (Fall 2021) and CMSC 320: Introduction to Data Science (Spring 2022) at UMD.
- I have been a *Peer-Assisted Learning mentor* at IIT Gandhinagar, helping freshmen who found it difficult to cope with their academic workload.

#### RESEARCH REPORTS

OSSuM: A Gradient-Free Approach For Pruning Neural Networks At Initialization VS Sadasivan, J Malaviya, and A Dasgupta [PDF]

Improved Generalized Adaptive Exponential Functional Link Network Approximates VS Sadasivan, SS Bhattacherjee, V Patel, and NV George [PDF]

FPGA-Based Area, Power, and Latency Optimized Approximate Multipliers For Neural Networks VS Sadasivan, CK Jha, and J Mekie [PDF]