VARUN CHANDRASHEKHAR GOHIL

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EDUCATION

Massachusetts Institute of Technology — September 2022 - Present
PhD, Electrical Engineering and Computer Science — GPA: 5.0/5.0

Indian Institute of Technology Gandhinagar — July 2016 - July 2020
B.Tech, Computer Science and Engineering — CPI: 9.04/10

EXPERIENCE

Student Researcher (Part-time), Google — June 2024 - August 2024
Hosts : Sundar Dev, David Lo, Gaurang Upasani

Research Intern, Google — June 2023 - August 2023
Hosts : Sundar Dev, David Lo, Gaurang Upasani

Research Intern, Google — June 2022 - August 2022
Hosts : Sundar Dev, David Lo

Graduate Researcher, Cornell University — August 2021 - May 2022
Advisor : Prof. Christina Delimitrou

Research Fellow, Ashoka University — August 2020 - July 2021
Advisor : Prof. Manu Awasthi

Visiting Scholar, University of Utah — May 2019 - July 2019
Advisor : Prof. Rajeev Balasubramonian

Summer Research Intern, IIT Gandhinagar — May 2018 - July 2018
Advisor : Prof. Manu Awasthi

AWARDS AND HONORS

- Best of Computer Architecture Letters of 2024 for "The Importance of Generalizability in Machine Learning for Systems" — 2024
- Awarded the Jacobs Fellowship at Cornell University — 2021
- Awarded cash prize of Rs.12,500 by IIT Gandhinagar for undergraduate research — 2021
- Best Presentation Award Finalist, HotStorage — 2020
- Received Special Mention in Undergraduate Research Conclave, IIT Gandhinagar. — 2019

PUBLICATIONS

** indicates equal contribution*

The Sunk Carbon Fallacy: Rethinking Carbon Footprint Metrics for Effective Carbon-Aware Scheduling
Noman Bashir, Varun Gohil, Anagha Belavadi Subramanya, Mohammad Shahrad, David Irwin, Elsa Olivetti, and Christina Delimitrou
ACM Symposium on Cloud Computing, **(SoCC)**, 2024

The Importance of Generalizability in Machine Learning for Systems
Varun Gohil, Sundar Dev, Gaurang Upasani, David Lo, Parthasarathy Ranganathan, Christina Delimitrou
IEEE Computer Architecture Letters, **(CAL)**, 2024
Selected as Best of IEEE Computer Architecture Letters 2024

Sabre: Improving Memory Prefetching in Serverless MicroVMs with Near-Memory Hardware-Accelerated Compression
Nikita Lazarev, Varun Gohil, James Tsai, Andy Anderson, Bhushan Chitlur, Zhiru Zhang, Christina Delimitrou
18th USENIX Symposium on Operating Systems Design and Implementation **(OSDI)**, 2024

Performance optimization opportunities in the Android software stack
Varun Gohil*, Nisarg Ujjainkar*, Joycee Mekie, Manu Awasthi
BenchCouncil Transactions on Benchmarks, Standards and Evaluations **(TBench)**, October 2021

Fixed-Posit: A Floating-Point Representation for Error-Resilient Applications
Varun Gohil*, Sumit Walia*, Joycee Mekie, Manu Awasthi
IEEE Transactions on Circuits and Systems II : Express Briefs **(TCAS-II)**, April 2021

Prefetching in Hybrid Main Memory Systems
Subisha V, Varun Gohil, Nisarg Ujjainkar, Manu Awasthi
12^{th} USENIX Workshop on Hot Topics in Storage and File Systems **(HotStorage)** 2020

[Reproducibility Report] One ticket to win them all: generalizing lottery ticket initializations across datasets and optimizers
Varun Gohil*, S. Deepak Narayanan*, Atishay Jain*
NeurIPS Reproducibility Challenge, **ReScience C**, 2020.

Effect of Feature Hashing on Fair Classification
Ritik Dutta*, Varun Gohil*, Atishay Jain*
Young Researchers' Symposium, ACM India Joint International Conference on Data Science & Management of Data, **(CODS-COMADS)** 2020

FAB: Framework for Analyzing Benchmarks
Varun Gohil*, Shreyas Singh*, Manu Awasthi
Work in Progress Track, 10^{th} International Conference on Performance Engineering **(ICPE)** 2019

META: Memory Exploration Tool for Android Devices
Nisarg Parikh, Varun Gohil, Manu Awasthi
Poster Track, 24^{th} International Conference on Mobile Computing and Networking **(MobiCom)** 2018

SERVICE

· **Program Committee, Reviewer** :
- ML for Systems workshop, NeurIPS 2024

· **Mentoring** :
- Alan Song — MIT PRIMES 2023
  Project : Reinforcement learning approaches for serverless autoscaling
  Selected as Top 300 scholar in Regeneron Science Talent Search (STS)
- Evan Ning — MIT PRIMES 2023
  Project : Reinforcement learning approaches for serverless autoscaling

· **Teaching Assistant** :
- 6.1910 Computation Structures, MIT — Fall 2024
- Machine Learning, IIT Gandhinagar — Spring 2020
- Operating Systems, IIT Gandhinagar — Fall 2019