

# VARUN CHANDRASHEKHAR GOHIL

Email: varuncg@mit.edu

Phone: (+1) 607-405-9483

Website: varungohil.github.io

## EDUCATION

### Massachusetts Institute of Technology

PhD, Electrical Engineering and Computer Science

September 2022 - Present

GPA: 5.0/5.0

### Indian Institute of Technology Gandhinagar

B.Tech, Computer Science and Engineering

July 2016 - July 2020

CPI: 9.04/10

## AWARDS AND HONORS

- Placed third in ArchReasoning Challenge held at ISCA 2025 2025
- Best Paper of Computer Architecture Letters 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
- Secured a position in Dean's List, IIT Gandhinagar for excellent academic performance in all semesters

## PUBLICATIONS

*(paper titles are hyperlinked)*

### When Machine Learning Isn't Sure: Building Resilient ML-Based Computer Systems by Embracing Uncertainty

Varun Gohil, Nevena Stojkovic, Noman Bashir, Sundar Dev, Gaurang Upasani, David Lo, Parthasarathy Ranganathan, Christina Delimitrou

Annual Conference on Machine Learning and Systems, (MLSys), 2026

### 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

### 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

### 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<sup>th</sup> 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<sup>th</sup> International Conference on Performance Engineering (**ICPE**) 2019

## META: Memory Exploration Tool for Android Devices

Nisarg Parikh, Varun Gohil, Manu Awasthi

Poster Track, 24<sup>th</sup> International Conference on Mobile Computing and Networking (**MobiCom**) 2018

## EXPERIENCE

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### Student Researcher, Google

*Hosts : Suvinay Subramanian, Kavya Sreedhar, Amir Yazdanbakhsh*

June 2025 - August 2025

### Part-time Student Researcher, Google

*Hosts : Sundar Dev, David Lo, Gaurang Upasani*

June 2024 - August 2024

### Research Intern, Google

*Hosts : Sundar Dev, David Lo, Gaurang Upasani*

June 2023 - August 2023

### Research Intern, Google

*Hosts : Sundar Dev, David Lo*

June 2022 - August 2022

### Graduate Researcher, Cornell University

*Advisor : Prof. Christina Delimitrou*

August 2021 - May 2022

### Research Fellow, Ashoka University

*Advisor : Prof. Manu Awasthi*

August 2020 - July 2021

### Visiting Scholar, University of Utah

*Advisor : Prof. Rajeev Balasubramonian*

May 2019 - July 2019

### Summer Research Intern, IIT Gandhinagar

*Advisor : Prof. Manu Awasthi*

May 2018 - July 2018

## SERVICE

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### · Program Committee, Reviewer:

- ML for Systems workshop, NeurIPS

2025, 2024

- **Mentoring:**
  - Nevena Stojkovic  
Project : Uncertainty-aware resource management for microservices  
MIT UROP 2025-Present
  - Angel Cervantes  
Project : Benchmarking Compound-AI applications  
MIT UROP 2025-Present
  - Paramuth Samuthrsindh  
Project : Benchmarking Compound-AI applications  
MIT UROP 2025-Present
  - Alan Song  
Project : Reinforcement learning approaches for serverless autoscaling  
*Selected as Regeneron Science Talent Search (STS) scholar*  
MIT PRIMES 2023
  - Evan Ning  
Project : Reinforcement learning approaches for serverless autoscaling  
MIT PRIMES 2023
- **Teaching Assistant:**
  - 6.S984 Datacenter Computing, MIT  
Spring 2026
  - 6.1910 Computation Structures, MIT  
Fall 2025, 2024
  - Machine Learning, IIT Gandhinagar  
Spring 2020
  - Operating Systems, IIT Gandhinagar  
Fall 2019
- **Organization:**
  - Grad School Application Tweet Storm with Students@Systems  
2022
  - Pre-conference volunteer for ICLR  
2020
  - Tutorial on DRAM timing parameters, Computer Architecture Winter School (CAWS)  
2020