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

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

PUBLICATIONS

Paper titles are hyperlinked

The Importance of Generalizability in Machine Learning for Systems
Varun Gohil*, Sundar Dev, Gaurang Upasani, David Lo, Parthasarathy Ranganathan, Christina Delimitrou
Computer Architecture Letters, **CAL**, 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

* indicates equal contribution

AWARDS AND HONORS

- Awarded the Jacobs Fellowship at Cornell University — September 2021
- Awarded cash prize of Rs.12,500 by IIT Gandhinagar for undergraduate research — July 2021
- Best Presentation Award Finalist, HotStorage 2020 — July 2020
- Received Special Mention in Undergraduate Research Conclave, IIT Gandhinagar. — September 2019
- Secured a position in Top 5 for poster presentation at SRIP 2018, IIT Gandhinagar. — July 2018

Grants : USENIX ATC 2020, ISCA 2019 (uArch), SIGSOFT CAPS ICPE 2019, ACM MobiCom 2018

TEACHING EXPERIENCE

Teaching Assistant — December 2019 - May 2020
Machine Learning, IIT Gandhinagar — *Instructor: Prof. Nipun Batra*

- Gave a lecture on Automatic Differentiation (*Video Link*)
- Developed a toy neural network library (*Code Link*)
- Assisted instructor in creating slides and interactive notebooks for lectures.

Teaching Assistant — July 2019 - November 2019
Operating Systems, IIT Gandhinagar — *Instructor: Prof. Nipun Batra*

- Conducted 10 lab sessions focusing on virtualization, concurrency and file systems.
- Gave a lecture on Assembly Language (*Slides*)

MISCELLANEOUS ACTIVITIES

- Served as a PRIMES mentor and advised two high-school students on their research project.
- Conducted a tutorial on DRAM timing parameters at Computer Architecture Winter School (CAWS).
- Served as a pre-conference volunteer for ICLR 2020.