# Vaibhav Bhosale

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# **EDUCATION**

2021–2026 **Ph.D.**, *Computer Science*, Georgia Institute of Technology, Atlanta, United States. Advisors: Dr. Ada Gavrilovska, Dr. Ketan Bhardwaj

2019–2021 M.S., Computer Science, Georgia Institute of Technology, Atlanta, United States.

2013–2017 B.Tech. with Honors, Computer Science & Engineering, Indian Institute of Technology, Bombay, Mumbai, India.

## PUBLICATIONS

- Krios: Scheduling Abstractions and Mechanisms for Enabling a LEO Compute Cloud. <u>Vaibhav Bhosale</u>, Ada Gavrilovska, Ketan Bhardwaj. In Proceedings of the 2024 ACM Symposium on Cloud Computing (SoCC 2024), 2024.
   Awarded Best Paper
- A Characterization of Route Variability in LEO Satellite Networks. <u>Vaibhav Bhosale</u>, Ahmed Saeed, Ketan Bhardwaj, Ada Gavrilovska. In Passive and Active Measurement Conference (PAM 2023), 2023.
   Invited presentation at IETF/IRTF Measurement and Analysis for Protocols Research Group (MAPRG)
- PaddleSats: Attitude Control and Station-Keeping for Ultra-Low Density SSP Satellites. <u>Vaibhav Bhosale</u>, Jonathan Dolan, Grishma Kalepu, Deeksha Manjunath, Gregory Durgin. In IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE 2023), 2023.
   Awarded Best Paper
- **Toward Loosely Coupled Orchestration for the LEO Satellite Edge**. <u>Vaibhav Bhosale</u>, Ketan Bhardwaj, Ada Gavrilovska. In 3<sup>rd</sup> USENIX Workshop on Hot Topics in Edge Computing (HotEdge 2020), 2020.
- Don't Let Your LEO Edge Fade at Night. <u>Vaibhav Bhosale</u>, Ketan Bhardwaj, Ada Gavrilovska. In 1<sup>st</sup> Workshop on Hot Topics in Systems Infrastructure (HotInfra 2023), 2023 [Colocated with ISCA 2023].
- Astrolabe: Modeling RTT Variability in LEO Networks. <u>Vaibhav Bhosale</u>, Ketan Bhardwaj, Ahmed Saeed. In  $1^{st}$  ACM Workshop on LEO Networking and Communication (LEO-NET 2023), 2023 [Colocated with Mobicom 2023].
- Efficient Cross-Frequency Beam Prediction in 6G Wireless Using Time Series Data. <u>Vaibhav Bhosale</u>, Navrati Saxena, Ketan Bhardwaj, Ada Gavrilovska, Abhishek Roy. In IEEE 2024 International Symposium on Networks, Computers and Communications (ISNCC'24).

### PATENTS

- Techniques for Overriding Libraries for Workloads in a Cloud-Computing Environment. US Patent 11838354 (2023)
- Spatial and Frequency Domain Beam Management Using Time Series Information. US Patent 18369488 (2024)

#### SERVICE

- Journal Reviews: 2024 IEEE Transactions on Parallel and Distributed Systems, 2023 IEEE/ACM Transactions on Networking, 2022 IEEE JSAC SI on Multi-Tier Computing for Next Generation Wireless Networks
- o Conference Reviews: 2024 IEEE International Conference on Communications (ICC)
- Artifact Evaluation Committee: SOSP 2024, Eurosys 2025, OSDI 2023, ATC 2023
- Shadow PC: Eurosys 2024

## AWARDS AND ACADEMIC ACHIEVEMENTS

• Finalist at Qualcomm Innovation Fellowship (45 out of  $\sim$ 200). (2023)

o Finalist (top 5) at Microsoft One Week Hackathon in the Bengaluru Science Fair for a Speech-based Drawing Assistant (2018)

Runners up at Mimamsa, the largest collegiate science quiz in India conducted by IISER Pune.

(2016)

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Winner at Bazinga Mathematics, the largest Mathematics quiz at IIT Bombay (80 teams participated).
 Secured All India Rank 161 in JEE-Advanced out of 1.5 million students.

• Amongst **top 1%** in the National Standard Examinations in Physics and Astronomy. (2013)

• Awarded National Talent Search Exam scholarship conducted by Government of India (selection ratio  $\approx 0.1\%$ ). (2009)

## PROFESSIONAL EXPERIENCE

- Summer 2024 **Research Intern**, *Microsoft Research*, Future of Scalable Software Engineering (FOSSE), Mentors: Dr. Peter Bodik, Iker Llorens.
- Summer 2022 **5G Research Intern**, *Meditek Inc.*, Advanced Communication Technology, Mentor: Dr. Abhishek Roy.
- Summer 2021 Research Intern, Microsoft Inc., Azure for Operators (AfO), Mentor: Dr. Sanjeev Mehrotra.
- Summer 2020 Senior Backend Developer Intern, IBM Inc., Cloud and Cognitive Services.
  - 2017–2019 Software Engineer, Microsoft India Development Center, Bengaluru, Outlook Rest API.

# TEACHING EXPERIENCE

- Head Teaching Assistant: Artificial Intelligence (Fall 2020, Spring 2021)
   Led a team of 21 Graduate Teaching Assistants, overseeing the planning and execution of course structure, assignments, examinations, and enhancing the overall student experience.
- o Graduate Teaching Assistant: Distributed Computing (Fall 2023, Fall 2021), Artificial Intelligence (Fall 2019, Spring 2020)
- **Undergraduate Teaching Assistant**: Artificial Intelligence (Spring 2017), Computer Architecture (Autumn 2016), Computer Programming & Utilization (Summer 2017)

# LEADERSHIP ROLES

- 2023-24 School of Computer Science Graduate Student Association, President.
  - $\circ$  Led an executive team comprising of 8 grad students overseeing academic, welfare, administration, and social activities for the graduate student body, while managing a budget exceeding \$50,000
- 2022-23 **School of Computer Science Graduate Student Association**, Finance Chair.
- 2016-17 Students' Technical Activities Body, Undergraduate Events Nominee.
  - $\circ$  Led a 3-tier team consisting of 20 managers and 100+ volunteers to handle 200+ events with a INR 1.5M budget for 7000+ students.
- 2015-16 Maths & Physics Club, Manager.