

Vaishnavi Raghavajosyula

rjvaishnavi.github.io • +49 681 9325 3549

Research interests

Internet Measurement, Applied Computer Science, Computer Networking

Summary of Qualifications

Driven by a passion for the networking and applied computer science, I am pursuing a PhD in the Internet Architecture group at the Max Planck Institute for Informatics. My research has explored a wide range of applications, from local to global, seeking innovative solutions to real-world problems. I have contributed to projects like developing early warning systems for natural disasters using Geo-spatial data at the Federal Geographic Data Committee, Department of the Interior (United States of America), and exploring robotics and forgery detection techniques using deep learning at the School of Computer and Information Sciences, University of Hyderabad. Combining my passion, analytical abilities, and curiosity, I am well-equipped to tackle complex challenges, make meaningful contributions to cutting-edge projects and drive success in a dynamic environment.

Education

- | | |
|--------------------|---|
| Sep 2024 – Present | Max Planck Institute for Informatics – Saarbrücken, Germany
Third year PhD student in the Internet Architecture Research Group
Supervisor: Prof. Dr. Anja Feldmann |
| 2019 – 2024 | University of Hyderabad – Hyderabad, India
Master of Technology in Computer Science (5-year Integrated)
Master's Research Thesis: "Facial Deepfake Forgery Detection and Segmentation"
First Division with Distinction, CGPA: 9.4/10 .
Topped 3 semesters with 10.0 GPA |

Research experience

- Jul 2023 – May 2024 **Master's Thesis, University of Hyderabad**
Supervisor: Prof. Dr. Digambar Pawar
Detecting Deepfakes videos through Vision Transformers, then localize and segment the forged locations through light-weight methods for image and computer forgery analysis
- Sep 2023 – May 2024 **U.S. Department of Veteran Affairs**
Supervisor: Dominique Ramirez
Web Analytics Research. Produced standard performance reports used by senior leaders from Social Media Information
- Aug 2022 – Sep 2023 **Federal Geographic Data Committee, U.S. Geological Survey**
Supervisor: Eldrich Frazier
Applied Science Research and Geospatial Data Analytics. Created an application to help citizen scientists understand how susceptible their environment is to a wildfire. Contributions were discussed in Group of Earth Observations (GEO) conference in November 2023, and published by Open Geospatial Consortium (OGC)
- June 2022 – Aug 2022 **Robotics, University of Hyderabad**
Supervisor: Prof. Dr. Vineet C. P. Nair
Developed a camera-aided robotic arm for tomato plantation-based application. Worked on integrating various IoT devices to microprocessors and applied Reinforcement learning modules to survey tomato plants' growth. Utilized a multitude of data communication modes to ensure optimal intra-device communication.

Teaching experience

- Spring 2026 **Teaching assistant:** Data Networks (Saarland University)
- Winter 2025 **Teaching assistant:** Hot Topics in Data Networks & Router Lab (Saarland University)
- Spring 2025 **Teaching assistant:** Data Networks (Saarland University)
- Winter 2024 **Teaching assistant:** Hot Topics in Data Networks (Saarland University)
- Spring 2024 **Teaching assistant:** Data and File Structures (DFS) & DFS Lab (University of Hyderabad)

Monsoon 2023 **Teaching assistant:** Database Management Systems(DBMS) & DBMS Lab (University of Hyderabad)

Publications

- ACM IMC 2026 J. Binkle, **V. Raghavajosyula**, T. Heinrich, A. Feldmann, T. Fiebig, and J. Zirngibl. 2026. The Internet's Path MTUs: How Big Can You Go?. doi: 10.1145/3777912.3839800
- Springer MTAP 2026 **V. Raghavajosyula** and D. Pawar, "Hybrid deep learning architecture for comprehensive deepfake video facial forgery detection and segmentation," doi: 10.1007/s11042-026-21320-8.
- TMA 2025 F. Steurer, **V. Raghavajosyula**, D. Lachos, A. Feldmann, and T. Fiebig, "Catching Wind in a Net: The Effects of the CrowdStrike Outage on Internet Traffic," doi: 10.23919/TMA66427.2025.11096993.

Talks and tutorials

- Jan 2026 Understanding the modern IPv6 Internet through ICMPv6 and network measurement
BENOCs GmbH, Berlin
- Dec 2025 Measuring ICMPv6 Inconsistencies
Pulse Internet Measurement Forum, Internet Society, Spain

Reviewing Activities

- May - Aug 2026 **IMC '26** - Shadow Technical Program Committee
- Feb - Aug 2026 **USENIX '26** - Artifact Evaluation Committee - Awarded Noteworthy Reviewer
- May - Aug 2025 **IMC '25** - Shadow Technical Program Committee
- Feb - Aug 2025 **USENIX '25** - Artifact Evaluation Committee - Awarded Noteworthy Reviewer
- Sep - Oct 2024 **ACSAC '24** - Artifact Evaluation Committee

Honors and Fellowships

- 2025 Pulse Research Fellowship - Special IPv6 Edition, Internet Society
- 2023 Hackathon Winner, GE Healthcare IT HACK'E'LTH Challenge 2023
Built an AI Chatbot based on RAG architecture.
- 2022 Hackathon National Finalist – 2nd place, Smart India Hackathon
Built an iris-recognition based attendance taking system.
- 2017 NIAS Prodigy Award (Fellowship – INR 50,000)
The youngest recipient of the award

Technical skills

Programming languages

Proficient in: Python, C/C++, R, Shell/Batch

Familiar with: Java, SciLab, JavaScript, HTML, Solidity

Software

ArcGIS Pro & online suite, L^AT_EX, Git, Open Street Map, Docker, Unix

Robotics

Arduino, Raspberry Pi, Jetson nano

Misc.

Qiskit, Google Analytics, Social Studio (salesforce)

Languages

English (fluent), Telugu (fluent), Hindi (fluent), German(A2), Korean (conversational)