

RITUL SATISH

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EXPERIENCE

• PhD Student

UT Austin

Aug 25 - Present

Austin, USA

- I work at the intersection of **LLM agents, reasoning, and ML systems**, with a focus on making long-horizon, tool-using agents more robust, reliable, and efficient. I study agent reasoning and planning, memory and state representations, context management, inference-time behavior, and systems support for scalable agent execution. My broader goal is to develop foundational methods for **reliable and efficient agentic AI at scale**.
- Working with: [Venkat Arun](#) & [Neeraja J. Yadwadkar](#)

• Distributed Systems Research Group (INESC-ID)

Research Intern

June 24 - August 24

Lisbon, Portugal

- Designed a custom graph sampling technique to downscale microservice trace graphs.
- Implemented the technique and conducted comparative analyses against naive approaches. Developed a benchmark leveraging the downscaled trace graphs as testbeds.
- Extended this work into my [master's thesis](#).
- Advisor: Rodrigo Miragaia Rodrigues

• AtLarge Systems Research Group

Research Student

Dec 23 - Jun 25

Amsterdam, Netherlands

- Investigating the performance of data store triggers in serverless applications.
- Performed a comprehensive qualitative and quantitative analysis of event triggers in AWS services, including S3, DynamoDB, and Aurora. This work was published at *CCGrid '25*.
- Advisor: Alexandru Iosup

• Teaching Assistant

Vrije Universiteit, Ashoka University

Amsterdam & New Delhi

- **Performance of Network Systems** in Fall 2024, Vrije Universiteit.
- **Computer Networks** in Spring 2024, Vrije Universiteit.
- **Security Engineering** in Spring 2023, Ashoka University.
- **Algorithms Design and Analysis** in Spring 2022, Ashoka University.

• Computer Security Lab

Research Assistant

June 22 - August 23

New Delhi, India

- Worked on Automotive Hardware and software security concepts. Led a team of 6 people.
- Built RF attack devices and conducted penetration testing on Hyundai Infotainment system and ECUs. Worked on Secure Over the Air IOT update mechanisms with TUF & Uptane.
- Advisor: Debayan Gupta

• Beyond Design Studio

Co-Founder & Developer

Jan 21 - Mar 23

Chennai, India

- Beyond Design Studio is a product focused creative agency which specializes in web and mobile app development, and UI/UX. Link to website [here](#).
- As a Business head, pitched and won targeted customers. Clientele: NITI Aayog(Indian Govt) plus a few other consumer brands.

EDUCATION

- **University of Texas at Austin** Aug 25 - Present
Austin, USA
PhD in Computer Science
 - GPA: 4.0*/4.0 (Until Spring 2026)
- **University of Amsterdam & Vrije Universiteit** Aug 23 - Jun 25
Amsterdam, Netherlands
Masters in Computer Science
 - GPA: 8.5*/10 (*Equivalent* to 4.0/4.0)
 - Track: Systems for Large Scale Applications
 - Thesis: Scale-Adjustable Benchmark for Microservice Deployments
 - Thesis Supervisors: Rodrigo Miragaia Rodrigues, Alexandru Iosup
- **Ashoka University** Jun 2023
New Delhi, India
PG Diploma in Advanced Studies and Research in Computer Science
 - Grade: 3.96/4 (Summa Cum Laude)
 - CS Departmental Award: Silver Medal for Academic Excellence
 - Thesis: Security Analysis of Automotive Over-the-Air (OTA) SW Update Systems
 - Thesis Supervisor: Debayan Gupta
- **Ashoka University** Jun 2022
New Delhi, India
BSc (Hons) in Computer Science
 - GPA: 3.43/4

PUBLICATIONS & PRE-PRINTS

- [1] **SATISH, RITUL**, Prasoon Sinha, Akiho Kawada, Neeraja J. Yadwadkar (2026). **Beyond Token Savings: A Systematic Study of Context Compression in LLM Agents**. *arXiv preprint arXiv:2609.32961*.
- [2] **SATISH, RITUL** (2025). **Mewbie: Scale Adjustable Benchmark for Microservice Deployments**. *Master's Thesis, Joint UoA-VU Master of Science in Computer Science, Vrije Universiteit Amsterdam and University of Amsterdam*.
- [3] **SATISH, RITUL**, Sacheendra Talluri, Sudarsan Sivakumar, Matthijs Jansen, Alexandru Iosup (2025). **Performance Characterization of Data Store Event Trigger Mechanisms for Serverless Computing**. *Proceedings of the 25th IEEE International Symposium on Cluster, Cloud, and Internet Computing (CCGRID 2025)*.
- [4] **SATISH, RITUL**, Alfred Daimari, Argha Chakrabarty, Kahaan Shah, and Debayan Gupta (2024). **Attacking Automotive RKE Security: How Smart are your 'Smart' Keys?**. *Cryptology ePrint Archive, Paper 2024/1816*.
- [5] **SATISH, RITUL**, Niranjana Rajesh, Argha Chakrabarty, Aditi Jain, Sristi Bafna, Arup Mondal, and Debayan Gupta (2022). **NEUROCRYPT: Coercion-Resistant Implicit Memory Authentication (Student Abstract)**. In *Proceedings of the AAAI Conference on Artificial Intelligence*, Vol. 36, No. 11, pp. 13041–13042. AAAI Press.

SKILLS

- **Programming Languages:** Golang, C++, C, Python, JavaScript
- **Technologies:** Docker, Kubernetes, Pytorch, SQL, Ansible, Git
- **Other:** Shell, $\LaTeX$, Figma, Photoshop