

Ravi Prakash

Extended Reality (XR) and Cyber Security Researcher

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WORK / INTERNSHIP

Research Associate

OCT 2024 - Present | [Digital University Kerala](#)

Working on industrial metaverse network security.

- Exploring the scope of AI-integrated digital twins for metaverse security.

Tools/Skills: Digital Twins, Cybersecurity, Deep Learning, Project Management.

Technical Intern (Research)

JAN 2024 - JUL 2024 | [Siemens Technology and Services Pvt. Ltd.](#)

Worked on a multi-domain authentication problem.

- Exploring various authentication methods and the scope of improvement.

Tools/Skills: Literature Analysis, Deep Learning, Python

Blockchain (Security Research) Intern [[project](#)]

FEB 2022 - JUN 2022 | [Kerala Blockchain Academy](#) | [Certificate](#)

Worked on Blockchain Attacks & Security under the supervision of Sr. researchers.

- Analyzed Bitcoin/Ethereum/Hyperledger vulnerabilities from CVEs

Tools/Skills: Topic Modeling, Machine Learning, Blockchains, Python

Other Roles

- **Teaching Assistant**

MAR 2023 - OCT 2024 | [Digital University Kerala](#) | M.Sc.

- **Penetration Testing Intern**

OCT 2021 - DEC 2021 | [Virtually Testing Foundation](#) | [Badge](#)

- **Content Analyst**

JUN 2020 - OCT 2020 | [The Data Tribune](#)

PUBLICATION / RESEARCH

(last 3 years)

- Thomas, T., **Prakash, R.**, Kaushik, A. (2025) Augmented and Virtual Reality: Theory and Practice, Wiley India. 1st Edition. (*Textbook*)
- Thomas, T., **Prakash, R.**, Pal, S. (2025) Intrusion Detection in Internet of Medical Things Using Digital Twins—A Review, *Computers, Materials & Continua*. Volume 84, Issue 3.
- **Prakash, R.**, Prabhakar, A. (2025) Leveraging Deep Learning for Unobtrusive User Authentication: A Hybrid Approach, *IEEE Symposium Series on Computational Intelligence (SSCI)*
- **Prakash, R.**, Thomas, T. (2025) Towards Secure AI-driven Industrial Metaverse with NFT Digital Twins, *International Conference on COMmunication Systems and NETworks (COMSNETS)*

SKILLS

Programming, Scripting & Markup Languages:

Python, R, C/C++, JavaScript, A-frame, Java, PHP, Golang, Prolog, Assembly x86, Shell Scripting (*bash*), HTML, CSS, LaTeX

Version Control & Others:

Git, SQL, Biometrics, Nmap, BurpSuite, Cryptography, NLP, Blockchains, Docker, Metasploit, Google Clouds, Linux, Data Structures & OOPs, AI/ML, Data Science, Adobe Suite, WordPress

REVIEWER

- IEEE Open Journal of the Computer Society (OJCS)
- Premier Journal of Computer Science (PJCS)
- Wiley Digital Library
- IEEE International Conference on Multimedia & Expo (ICME) - 2025 & 2026

ATTRIBUTES

- Good Communication
- Fast Learning
- Time Management
- Critical Thinking & Problem Solving
- Teamwork & Leadership

- **Prakash, R.**, Nayar, G.R., Thomas, T. (2023) Security Risk Assessment of Metaverse Based Healthcare Systems Based on Common Vulnerabilities and Exposures (CVE), IEEE International Conference on Recent Advances in Systems Science and Engineering (RASSE)
- Sharma, A., Dutta, M., **Prakash, R.** (2023) Comparative Performance Analysis of ML Algorithms for COVID-19 in India, International Conference on Artificial Intelligence of Things (ICAIoT). *(Best Paper)*

EDUCATION

Digital University Kerala , Trivandrum	NOV 2022 - PRESENT
Ph.D. Computer Science (<i>Immersive Technologies</i>)	
IITM-Kerala , Trivandrum	OCT 2020 - JUL 2022
M.Sc. Computer Science (<i>Cybersecurity Major - Research Based</i>)	9.26 GPA
University of Delhi , New Delhi	JUL 2017 - AUG 2020
B.Sc. Hons. Computer Science (<i>First Division - Research Based</i>)	7.97 CGPA
Jawahar Navodaya Vidyalaya (Fbd.) , Haryana	AUG 2013 - APR 2017
10th & 12th Grade (<i>99% in Computer Science</i>)	88%

PROJECTS

- **dyPixa** ([link](#))
Maintained during Hacktoberfest-10 | Aimed to dynamically generate abstract images using Computer Vision, ML, and Sentiment Analysis.
- **SecureAuth-SA** ([link](#))
A secure authentication system consists of a novel cryptographic mechanism
- **CaterApp** ([link](#))
A TCP-based file-sharing utility that can be accessed via a bash terminal. It can also encrypt files before transmitting, ensuring a secure transfer.

AWARDS AND RECOGNITION

- **Gold Medal** | SNTC Student Competition
2024 | SocMeta **IEEE ComSoc** | Adaptive Security Protocols for XR and Metaverse
- **Qualified for CSI InApp Award** (Round-1)
APR 2022 | by Computer Society of India (CSI) | AI/ML, Biometrics & Cryptography
- **Second position in the Advanced Category of NetScout Cyberathon**
MAY 2022 | **Won \$500** | Developed an Authentication Tool
- **Organizer of Encrypt-CTF**
APR 2019 | Research & Development Team | University of Delhi
- **Other Achievements/Participations**
 - **GATE Qualified - 92.85th (percentile)**
 - Multiple **Coursera** certifications in **Cybersecurity, Data Science, and XR**.
 - **Bug reported in Moodle Server**

OTHER CONTRIBUTIONS

- Peer Learning lead at Innovation Club, DUK
- Founder of HackClub-DUK
Affiliated with **HackClub** (now **Hack-X**)
(SEP 2021 -Present)
- Co-founder of **Jijeevisha** (NGO)

HOBBIES

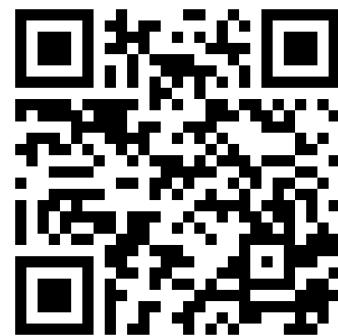
- Open Source Projects
- Attending tech meetups
- Photo Editing & Podcasts
- Blogging & Public Speaking
- Poetry & Philosophy

LANGUAGES

Hindi (native),
English (C1 Proficiency, DET 135),
Urdu (basic)

PORTFOLIO WEBSITE

I'm up for any new metaverse, XR, or cybersecurity project.
([contact links on portfolio](#))



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