

Venkatesh Kumar

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Education

M.Tech. (CSE) , Indian Institute of Technology Jodhpur CGPA: 7.34	2023 – 2025
B.E. (CSE) , Sant Longowal Institute of Engineering and Technology CGPA: 8.79	2017 – 2021
Senior Secondary , BSEB Board Percentage: 67.4%	2016
Secondary , BSEB Board Percentage: 74.2%	2014

Experience

Teaching Assistant, Computer Science and Engineering Dept., IIT Jodhpur Aug 2023 – Present
Jodhpur, India

- Assisted professors in courses such as Cryptography and Security Engineering, gaining hands-on exposure to advanced concepts.
- Helped students understand Computer Networks lab problems and conducted viva sessions.
- Designed and prepared weekly lab assignments to strengthen students' understanding of DSA.
- Evaluated answer sheets for over 500 students and provided constructive feedback.

Application Development Analyst, Accenture Sep 2021 – May 2023
Bengaluru, India

- Managed Git processes for project creation and collaboration in a team of 8.
- Developed automated scripts reducing manual data entry time by 70%.
- Completed SAP ABAP training for a 120-member cohort, improving task efficiency by 15%.

Penetration Testing Intern, Virtually Testing Foundation Jul 2021 – Aug 2021
Remote

- Performed penetration testing on vulnerable web applications and prepared detailed penetration testing reports.

Projects

- **Consensus for Switch Migration in Distributed SDN Controllers:** M.Tech thesis proposing new protocols for switch migration in distributed SDN controllers using ONOS and Mininet.
- **DDoS and ARP Attack on SDN:** Simulated SDN, performed DoS attacks, and applied machine learning to classify network traffic.

- **Zero Knowledge Proof System:** Python-based implementation of ZKP demonstrating cryptographic hardness assumptions.
- **Multi-threaded Web Server:** Rust-based server implementing a custom thread pool for higher throughput.
- **Command Line Application:** Rust-based CLI tool similar to `grep`.
- **CTF Labs using Docker:** Developed CTF labs covering web vulnerabilities, cryptography, and reverse engineering.
- **Penetration Testing on DVWA:** Manual and BurpSuite-based pentesting following OWASP Top 10 with standard reports.
- **Automates:** Automated web catalogue updates and PDF report mailing using Python and Bash.

Key Courses Taken

- Cryptography, Security and Applications
- Virtualization and Cloud Computing
- Machine Learning, Deep Learning

Technical Skills

- **Programming & OS:** Python, C/C++, SQL, Bash, Rust, Linux, Kali, Windows
- **Tools & Frameworks:** Git, BurpSuite, Nmap, Wireshark, Minizinc, OpenFlow, Docker, GCP, ONOS, Mininet, Jenkins, PyTorch, TensorFlow, Jupyter Notebook, LangChain

Achievements

- Qualified UGC-NET (Computer Science and Applications), 85.84 percentile (June 2025).
- Selected for ACM Winter School in Cryptography (2025).
- Top 100 in TCS HackQuest Season 9; received placement offer (2025).
- Selected for ACM Summer School in Cryptography (2024).
- Scholarship of INR 90,000 to attend BLACK HAT ASIA 2024.
- AIR 3596 in GATE CSE out of 123,967 candidates (2024).
- Top 100 in TCS HackQuest Season 6 (2021).
- AIR 40386 in JEE Main (2017).
- Selected for NTSE Level-1 from Bihar (2012).

Certifications

- Google IT Support & IT Automation
- NPTEL Certification on Ethical Hacking
- NPTEL Certification on DSA using Python