Mohammad Ibrahim Saleem

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EDUCATION

University of Houston — Houston, TX
Master of Science in Cybersecurity — *Expected August 2026*
- GPA: 4.0/4.0; Relevant Coursework: Network Security, Secure Enterprise Computing, Cryptography, Data Analysis for Cybersecurity, Risk Management

Rajiv Gandhi Proudyogiki Vishwavidyalaya
Bachelor of Technology in Computer Science Engineering — *July 2023*
- Relevant Coursework: Python, Data Structures & Algorithms, DBMS, Cloud Computing, Operating Systems, Networking Protocols (TCP/IP, DNS, HTTP, SSL/TLS), Cryptography, Machine Learning

EXPERIENCE

Research Assistant (AI & IoT Security) — Sep 2024 – Present
University of Houston — *Houston, TX (On-site)*
- Developing an AI-driven Automatic Pentesting security tool for automated code analysis, penetration testing. Bandit, Gemini AI, and Ollama (LLaMA) were used to identify vulnerabilities and exploit them. (Git Repo)
- Designed a secure IoT pairing system leveraging automotive signal noise, implementing cryptographic protocols and TLS/SSL encryption for secure authentication in IoT networks.
- Engineered a network security monitoring system integrating Python-based security analytics, intrusion detection models, and log analysis, improving threat detection efficiency by 40%

Associate Software Engineer — March 2023 – February 2024
Nagarro Software Pvt. Ltd.
- Designed and developed scalable backend solutions using C#, .NET Core, and SQL Server, optimizing database queries to improve response times by 30%, and built secure REST APIs with JWT authentication and role-based access control to enhance security.
- Developed interactive Angular-based UI dashboards, improving operational efficiency and real-time data visualization, and integrated secure backend services to ensure seamless data communication.
- Automated data analytics pipelines using Python and Pandas, reducing manual reporting efforts by 40%, and implemented data-driven insights to improve business intelligence processes.

Research & Cyber Security Intern — July 2022 – December 2022
State Cyber Cell MP Police
- Conducted security assessments on critical infrastructure systems, identifying vulnerabilities in power grids and telecom networks, recommending risk mitigation strategies.
- Researched emerging attack vectors and applied Python-based threat intelligence analytics, improving incident response readiness
- Delivered cybersecurity awareness training to 500+ students and professionals on network security, cybercrime prevention

PROJECTS

Secure Offline AI Assistant for Network Operators | *Python, Flask, Llama* | Link
- Developed a fine-tuned Llama-based AI assistant to help network operators troubleshoot operational issues, leveraging secure NLP models for streamlined responses. Fine-Tuned using Unsloth's Google colab

Splunk-Based Detection and Response Automation | *ML, Python, SDN, Ryu* | Link
- Developed Splunk-based security dashboards to monitor utility network traffic and detect anomalies in real-time. Integrated AbuseIPDB for automated reputation analysis to enhance critical infrastructure security. Set up alerts for high-risk events, reducing manual workload and improving response efficiency.

Advanced Network Performance Monitoring System | *ML, Python, SDN, Ryu* | Git repo
- Engineered a network security system integrating ML-based DDoS detection with 98% accuracy, improving real-time mitigation.
- Integrated the MITRE ATT&CK Framework to analyze attack patterns and dynamically implement real-time threat mitigation strategies, improving network resilience and operational efficiency.

Cybersecurity Awareness Platform - *Python, JavaScript, Flask, Networking libraries* | sctool.web.app
- Designed an interactive platform to simulate cybersecurity scenarios, enhancing user learning and engagement by 40%. Integrated over 30 Security tools made using python from data scraping tools to brute force attack tools.

TECHNICAL SKILLS & CERTIFICATIONS

Programming Languages: Python (Primary), C#, JavaScript, TypeScript, SQL, HTML, CSS
AI/ML Frameworks: TensorFlow, PyTorch, scikit-learn
Software Development: Object-Oriented Programming (OOP), API Development, Secure Coding Practices, Debugging, Troubleshooting, Test-Driven Development (TDD)
Networking & Security: Networking Protocols (TCPIP, DNS, HTTP, SSLTLS, BGP), Packet Analysis (Wireshark, tcpdump), Cryptography, Intrusion Detection (IDSIPS), Threat Intelligence, MITRE ATT&CK
Frameworks & Tools: .NET Core, Angular, ReactJS, Node.js, Docker, Kubernetes, CICD Automation (Jenkins, GitHub)
Databases & Cloud: SQL Server, MySQL, PostgreSQL, Firebase, Cloud Networking, AWS Security, Database Optimization
Development Tools: Git, Postman, Terraform, Bash, PowerShell, Shell Scripting, Static Code Analysis (Bandit, SonarQube)
Data Analysis: Pandas, NumPy, Data Visualization (BI tools), SQL
Certifications: CompTIA Security+, Azure Security Fundamentals, Python for Networking and Security (LinkedIn), C# & .NET