KAVENNESH BALACHANDAR

kavenneshsec@gmail.com ~ +1(786) 642 2837 ~ https://www.linkedin.com/in/kavenneshbv/ ~ https://github.com/Kavennesh

EDUCATION:

Master of Cyber Security; | GPA : 3.89/4.00 — **August 2024 - April 2026**
Florida International University, Miami, FL.

B.E. in Computer Science and Engineering; | GPA : 8.9/10.0 — **November 2020 - May 2024**
Sri Krishna College of Engineering and Technology, Coimbatore

WORK EXPERIENCE:

Student Teaching Assistant, Florida International University, Miami, FL — **January 2025 - Present**
- Conducted **30+** technical lab sessions for **300+** undergraduate students in C, HCI, Algorithms, and DBMS, ensuring high engagement and code quality through real-time debugging and Q&A support.
- Designed **10+** exam guides, assignments, and led hands-on weekly workshops, increasing comprehension by **40%** and reducing student failure rate significantly.
- Collaborated with **5+** faculty members to simplify advanced concepts, cutting project debugging time by **25%** and improving course feedback scores by **2** points.

Network Analysis, DECCAN SOLUTION, Chennai, India — **December 2023 - February 2024**
- Configured **15+** enterprise-level firewalls and implemented secure socket programming, strengthening layered defense strategies for internal infrastructure.
- Deployed TLS binding across **4** live applications, preventing unauthorized access and boosting security posture by over **30%** in compliance audits.
- Automated **20+** Linux remote tasks with Bash/Python, optimized NAT environments, and cut DevOps workload by **50%**.

PROJECTS:

Home Networking Lab - Personal Project | Salem, Tamil Nadu — **May 2025 - July 2025**
- Built a globally accessible SSH lab environment on Debian with Ngrok, bypassing traditional port forwarding and hosting **10+** live secure access sessions across platforms.
- Managed OpenSSH with role-based access control for **5+** users, deploying persistent tunnels using **systemd** scripts and custom bash automation.
- Showcased expertise in remote access, Linux firewall configuration, and network tunneling under NAT restrictions.

VPN Monitoring & Detection System | Coimbatore, Tamil Nadu — **January 2024 - March 2024**
- Developed an enterprise-grade VPN detection system using Deep Packet Inspection to track **100+** encrypted tunnels with **90%+** accuracy.
- Enforced **3** custom security policies, identified and responded to **50+** anomalies in real-time traffic using packet-level analysis.
- Deployed solution into enterprise systems with live logging, enabling continuous monitoring and **zero-delay** threat response at scale.

Enhanced Image Generator | Coimbatore, Tamil Nadu — **January 2023 - March 2023**
- Built Python-based ML tool using OpenCV, NumPy & PIL, improving image clarity by **35%** and speeding low-quality data processing.
- Applied smart preprocessing pipelines (resizing, sharpening, histogram equalization) to **1,000+** images to improve visual quality.
- Validated improvements via automated A/B image testing, achieving measurable improvements in ML model training accuracy.

PUBLICATION:

VPN Blocker: Detection and Prevention of VPN Tunneling in Enterprise Networks. — **February 2024 - March 2024**
- Designed and implemented a VPN detection system using Deep Packet Inspection (DPI) to identify and restrict unauthorized VPN traffic across enterprise networks.
- Achieved **90%+** detection accuracy in identifying encrypted tunneling protocols, improving overall network compliance and reducing security risks.
- Enhanced organizational visibility and control over **100+** daily network sessions by integrating the system into existing monitoring infrastructure.

AWARDS AND EXTRA-CURRICULAR ACTIVITIES:

- Eraksha Cybersecurity Competition (Aug 2023): 1st place nationally for solving real-world cyber challenges.
- Kavach Hackathon (Jun 2023): Qualified at college level for India's leading cybersecurity innovation program.
- Amazon AppSec CTF - NAMER (Sep 2025): Selected to compete globally in Amazon's application security CTF.

SKILLS AND STRENGTHS:

Programming & Scripting: Python, Java, C++, Shell Scripting, Git, Bash
Security & Networking Tools: Wireshark, Nmap, Burp Suite, Kali Linux, Metasploit, Tcpdump, OpenVPN
Operating Systems: Linux (Debian, Kali, Ubuntu), Windows Server