VIKHAS SOMASUNDARAM GIRI

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EDUCATION

University of California, Davis — **Davis, CA**
Master of Science in Computer Science — *September 2025 – June 2027 (Expected)*

PSG Institute of Technology and Applied Research — **Coimbatore, India**
Bachelor of Engineering in Computer Science and Engineering | *GPA:* ***9.47/10.00*** — *June 2023*

CERTIFICATIONS & SKILLS

Certifications: Cisco Certified Networking Associate (CCNA), Web Development (Verzeo)
Technical Skills: UNIX, Windows, Docker, Kubernetes, Telegraf, JTIMON, Git, Prometheus, Victoria Metrics
Programming: Python, C++, HTML, CSS, MYSQL, MongoDB

PROFESSIONAL EXPERIENCE

Software Engineer-3
Juniper Networks, Bangalore, India — January 2023 – August 2025

- Engineered Routing Bot for Juniper's IT and BNG networks, enabling automated anomaly detection and root cause analysis, cutting recovery time by 50% and improving resolution by 30%.
- Optimized data ingestion service to scale from 20 to 1000 state devices and from 2 to 20 LSDB devices using parallel Kafka consumers, async publishing, and multi-tenancy support, ensuring zero streaming delays under heavy load.
- Designed Kafka-based APIs with correlation IDs, caching, and timeout handling to deliver real-time anomaly responses, eliminating manual log analysis and improving operational efficiency.
- Integrated Routing Bot into the Paragon ecosystem, containerized services on Kubernetes, and automated CI/CD pipelines with G1/G2 tests, detecting failures early and minimizing production risk.
- Developed anomaly detection algorithms (Dijkstra's shortest path, SPF/FIB validation, dynamic thresholding) that identified prefix flaps and misconfigurations in live networks, improving reliability by 15%.
- Built the telemetry and alerting pipeline by migrating from Telegraf to JTIMON, integrating with Prometheus, ALERTA, and Microsoft Teams for real-time notifications, strengthening monitoring and collaboration.
- Implemented OpenConfig Graceful-Restart support for both configuration and telemetry, advancing Juniper's standards compliance and resilience.

Product Developer Intern
Kaar Technologies, Chennai, India — August 2021 – February 2022

- Designed and deployed an onboarding web application with RESTful APIs, backend (Node.js, MongoDB) and frontend (HTML5, CSS3), streamlining workflows and improving user experience.

ACADEMIC PROJECT EXPERIENCE

Pattern Recognition Algorithm to Detect Suspicious Activities — January 2023 – April 2023

- Developed a deep learning algorithm for detecting suspicious activities and sending real-time alerts, comparing MobileNetV2 and CNN models, with CNN achieving 95% accuracy.

Itech Expo Application — January 2022 – February 2022

- Designed and developed a web application for real-time crowd updates and event details, used by 500+ users, utilizing HTML, CSS, JavaScript, Node.js, and MongoDB for seamless data delivery.

PUBLICATIONS

- **Pattern Recognition Algorithm to Detect Suspicious Activities.** International Conference on Sustainable Computing and Smart Systems (ICSCSS-2023), India.
- **Effective Marine Animal Detection and Rare Species Classification Using Autonomous Drones.** International Conference on Next Generation Computing System (ICNGCS – 2023), India.
- **Standalone Chatbot Application in Python**. International Journal for Research in Applied Science & Engineering Technology (IJRASET-2022), India.