GANGA RAMESH

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Summary

A proactive Computer Science student with proven experience in Site Reliability Engineering, Full-Stack Development, and Machine Learning. Adept at enhancing system stability and performance through automation and deep-dive analysis. Eager to apply a strong foundation in software development and system design to solve complex problems and drive technical innovation.

Education

Amrita University *Coimbatore, India*
B.Tech in Computer Science and Engineering *Sep 2022 – Jun 2026*
CGPA: 8.64

Chandrakanthi Public School *Coimbatore, India*
Higher Secondary Education (CBSE) *Jun 2020 – Jun 2022*
Percentage: 93.2%

Experience

Site Reliability Engineering Intern *Jubail, Saudi Arabia*
Specialized Industrial Services Co. LTD. (SISCO) *Apr 2025 - Jun 2025*

- Reduced Mean Time To Resolution (MTTR) for critical production alerts by over 30% through rapid triage and resolution.
- Increased system stability by developing Python and Bash automation scripts for health checks, log analysis, and failure recovery.
- Boosted monitoring effectiveness by over 40% by optimizing alerting thresholds in Splunk and Datadog.
- Led the migration of legacy monitoring scripts to a new centralized platform, improving system maintainability and response time.

Research Experience

Deep Learning for Adaptive Encryption in Edge Systems *Amrita University*

- Developed lightweight ASCON and GIFT encryption algorithms to protect edge devices from differential, integral, and cube attacks.
- Designed and optimized a dynamic RNN-based security model for Raspberry Pi to adapt encryption techniques based on real-time threats.

Key Projects

Sony-SSUP Embedded Development *Embedded C, FreeRTOS, IoT*

- Developed an Edge-based Cyber-Physical System using Spresense and Daisy Seed hardware for a smart agriculture application.
- Designed a real-time multitasking architecture using FreeRTOS with mutex-protected queues for robust sensor data handling.

Distributed Video Communication Streaming Platform *Python, Flask, Nginx, DevOps*

- Architected a low-latency platform for on-demand streaming and real-time multi-node video calls.
- Implemented agent-based load balancing and adaptive bitrate streaming to ensure high availability and a smooth user experience.

Pneumonia Detection in Chest X-Rays *Python, TensorFlow, Keras*

- Achieved 93% accuracy by engineering a CNN with a VGG16 backbone and a two-stage transfer learning protocol.

For more projects, please visit my GitHub profile.

Certifications

AI ML *Jan 2025*
IIT Madras (onsite)

IoT Automation with Raspberry Pi *Jan 2025*
IIT Madras (onsite)

AWS Academy Graduate - Cloud Foundations *Aug 2025*
AWS Academy

Technologies

Languages: Python, Java, C, C++, JavaScript, Go, Scala, Prolog, Embedded C

Web Development: React, Node.js, Express, Flask, HTML/CSS, RESTful APIs, Tailwind CSS, Bootstrap

Data Science ML: TensorFlow, Keras, Scikit-learn, OpenCV, NLTK, Matplotlib

Cloud DevOps: AWS, GCP, Azure, Docker, CI/CD, Jenkins, Prometheus, Grafana, Nginx

Databases Version Control: SQL, NoSQL, Git, GitHub

Core Competencies: Full-Stack Development, Distributed Systems, Machine Learning, IoT, Scalability, Networking (TCP/IP), Data Structures Algorithms, System Design, Security