Sanath Rao Uppoor

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Objective

Graduate Software Engineer with 4+ years of backend systems engineering experience (Golang, Java, Python), now pursuing MSc Applied AI at Warwick. Strong foundations in C/C++, computer architecture, Linux, embedded concepts, concurrency, and performance optimisation. Seeking to contribute to Arm's engineering teams.

Education

University of Warwick, MSc in Applied Artificial Intelligence — Sep 2025 – Sep 2026
WMG Excellence Scholarship Recipient (£10,000)
Relevant Coursework / Modules:
- Programming for Artificial Intelligence, AI and Deep Learning, and Applied Statistics.

Visveswaraya Technological University, B.E in Electronics and Communication | GPA: 8.22/10 — Aug 2017 – Aug 2021

Experience

Engineer II, American Express – Bengaluru, India — Apr 2025 – Sep 2025
Global Loyalty Benefits Platform – Site Reliability and Backend Development
- Optimised Golang microservices processing 12K–18K requests/min, reducing API latency by 30% with profiling, lock contention analysis, and CPU/memory benchmarking..
- Performed deep software behaviour analysis (goroutine profiling, heap snapshots, p99 latency tuning), improving system reliability and achieving 99.9% uptime across services.
- Built secure REST integrations with robust error-handling and payload validation, reducing partner-side failures by 25%.
- Implemented observability improvements (structured logging + metrics), reducing average RCA time by 40%. Collaborated with SREs and architects to resolve integration issues across 10+ partner systems, improving interoperability and version consistency.

Software Engineer, TATA Consultancy Services – Bengaluru, India — Aug 2021 – April 2025
North American Healthcare Technology Client: Medical Device Asset Management System
- Engineered high-availability microservices handling 4.4M+ medical devices, sustaining 99.9% uptime under high concurrency.
- Designed ingestion pipeline reducing device-creation time by 90%, using efficient JSON validation, memory-safe parsing and optimised caching. Built secure multi-source ingestion flow improving data traceability and regulatory compliance across 3 continents.

North American Insurance Client: Scalable Notification System for 6,000+ Applications
- Delivered notification platform handling 50,000+ messages/day for 6,000+ apps, improving delivery success to 99
- Achieved 40% higher throughput via batching, non-blocking I/O, and optimised Kafka consumer groups.
- Reduced system overhead by 28% by refactoring inefficient payload parsing and eliminating redundant serialisation.

Machine Learning Intern, RV CISCO CoE – Bengaluru, India — Aug 2020 – Sep 2020
Augmented Respiratory Health Monitoring
- Built TensorFlow pipeline improving diagnostic accuracy by 18% over baseline, enabling real-time classification of X-ray images across 3 disease categories.Achieved >90% precision by implementing augmentation, contrast enhancement and model fine-tuning.

Skills

Core Programming: Golang, Java, Python, C++
Backend Development: REST APIs, Microservices Architecture, API Design & Documentation, JSON/XML Processing, OAuth 2.0, Networking (Ethernet/IP/TCP/UDP)
Databases & Messaging: PostgreSQL, SQL, NoSQL (Opensearch), Kafka, Database Design & Optimization
Cloud & DevOps: AWS (Certified Developer), Docker, Kubernetes, Git/GitLab/Bitbucket, CI/CD, Terraform, Unix/Linux
Frontend & UI: React, TypeScript, HTML/CSS, Responsive Design, System Architecture
AI/ML & Tools: TensorFlow, Keras, LLMs, RAG Workflows, Postman, API Testing, Monitoring

Projects

AI SRE for Root Cause Identification | Golang, PostgreSQL, Docker, AWS, REST APIs, OAuth 2.0 | GitHub Link
- Built a Golang-based log-fingerprinting engine processing 5K+ logs/min, identifying anomalies and reducing RCA time by 40% through high-performance batching and concurrent parsing.

Deep Learning Precision Farming: Disease Detection by Transfer Learning | Elsevier, Nov 2021 | DOI Link
- Created and cleaned a custom dataset of 6,000+ leaf images and built a transfer-learning CNN achieving 94.8% accuracy across 5 disease classes.