

Balakumar Ramkumar

✉ balakumarr2001@gmail.com — 📞 9003854940 — 🌐 balakumarr15 — 📧 balakumarr15

EDUCATION

B.E. in Computer Science
MIT Campus, Anna University

Jul 2019 – Jun 2023
CGPA: 9.18/10

TECHNICAL SKILLS

- **Languages:** Golang, Java, Python, C++, SQL
- **Frameworks:** Spring Boot, Rest APIs, Microservices
- **System Design:** Distributed Systems, Microservices, Event-Driven Architecture, CI/CD, Secure Tokenization
- **Databases & Caching:** MySQL, MongoDB, Redis, ElasticSearch, DynamoDB
- **Messaging & Cloud:** Kafka, RabbitMQ, AWS (EC2, Lambda, S3, DynamoDB), Docker

PROFESSIONAL EXPERIENCE

Ramco Systems

Software Engineer I

Chennai, India

May 2025 – Present

- **Legacy Modernization (Strangler Fig Pattern):** Architected the migration of legacy SQL Server payroll logic by implementing a **Strangler Fig** integration layer; incrementally replaced monolithic stored procedures with modular Python transformer services, ensuring zero downtime and 100% data consistency.
- **Distributed Orchestration:** Designed a distributed orchestration layer to manage complex payroll workflows, utilizing **Kafka** for asynchronous messaging between transformation services; improved system throughput by **35%**.
- **API Development:** Built resilient RESTful APIs to coordinate the end-to-end payroll pipeline, implementing circuit breaking and retry mechanisms which enhanced operational reliability and fault tolerance.

Tekion Corp.

Software Engineer I

Chennai, India

Apr 2025 – May 2025

- **Scalability Optimization:** Decoupled the User Preference system from the core Users collection, migrating **300K+ records** to a dedicated microservice structure; optimized API query performance, significantly reducing latency for high-traffic endpoints.

Associate Software Engineer

Jul 2023 – Mar 2025

- **Voice Integration System:** Designed and implemented a fault-tolerant Twilio-based voice integration for CRM platforms; built failure recovery mechanisms that reduced ticket resolution time by **25%** and increased CSAT by **15%**.
- **Event-Driven Features:** Developed scalable backend features (Comments Dashboard, Note Versioning) using **Kafka** event streaming to offload synchronous API demand, improving service latency by **30%**.
- **System Migration:** Migrated hardcoded email templates to a database-driven configuration system, simplifying updates for internal teams and improving maintainability across customer environments.
- **Workflow Automation:** Engineered automated status management scripts and implemented cron jobs to sanitize ticket tagging, reducing manual triage overhead and achieving a **35% improvement in First Response Time (FRT)**.

Associate Software Engineer - Intern

Jan 2023 – Jul 2023

- Developed a live user tracking system using **Pusher websockets** and managed **CI/CD pipelines** via **Jenkins** to optimize real-time agent allocation and deployment cycles.

KEY TECHNICAL PROJECTS

Secure Payment Tokenization Service

Golang, Kafka, Redis, DynamoDB

- **High-Security Architecture:** Designed a Go-based microservice utilizing **AES-256-GCM** envelope encryption and **DynamoDB** for high-performance, scalable persistence of sensitive financial data.
- **Event-Driven Ecosystem:** Architected a real-time status engine using **Kafka** and **Redis Pub/Sub** for transaction updates, integrating **RabbitMQ** for non-blocking asynchronous audit logging.

Multi-Agent AI Orchestrator (Go ADK)

Golang, Google ADK, Gemini 3 Flash, Redis, Docker

- **Autonomous Orchestration:** Developed a multi-agent fleet using the **Google ADK** to coordinate specialized LLM agents for financial analysis, featuring high-quality **Audio (TTS)** and Text streaming via **Gemini 3 Flash**.
- **Performance Optimization:** Engineered a **Redis-based pre-caching layer** for startup synchronization, achieving sub-millisecond retrieval of document context during real-time, tool-enabled PDF processing.