RAMITH K S

Senior Backend Engineer

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Professional Summary

Senior Backend Engineer (4+ years) specializing in Python/FastAPI, Node.js, and distributed systems on AWS. Delivers scalable, low-latency microservices (sub-300ms P95), 4× query speedups, and 1M+ daily request platforms. Strong in caching strategies, event-driven architecture, schema optimization, and leading teams to ship reliable production systems.

Professional Experience

Zolnoi Innovations   *October 2024 – Present*
Senior Backend Engineer   *Bengaluru*
Tech Stack: FastAPI, PostgreSQL, Redis, AWS, Docker, APScheduler

- Architected a multi-channel notification engine processing 5,000+ alerts/day with 99.5% delivery reliability, reducing operational load and alert fatigue.
- Consolidated 200+ alert streams into digest summaries, cutting user noise by 75% and improving engagement.
- Reduced API P95 latency from 800ms to 300ms (60%) through Redis caching, optimized DB calls, and critical-path refactors.
- Shipped 15+ production features across microservices; raised test coverage to 85%, preventing 30+ regressions.
- Achieved 4× faster queries via schema redesign, index tuning, and execution plan optimization.

JustPoll (Streetlab Internet Pvt Ltd)   *October 2021 – March 2025*
Founder & CTO   *Bengaluru*
Tech Stack: Node.js, TypeScript, PostgreSQL, Redis, AWS (ECS, S3), WebSockets, Docker

- Scaled a TypeScript backend to 1M+ daily requests and 50K+ MAUs; improved query performance by 40% via schema optimization and caching.
- Architected WebSocket infrastructure for 1,000+ concurrent users with distributed state and connection lifecycle management.
- Cut deployment time by 60% (45 → 15 mins) by introducing ECS autoscaling, CI/CD, and CloudWatch-driven observability.
- Built Redis-backed pipelines handling 100K+ jobs/day with <200ms P95 latency, reducing incidents by 45%.
- Led a 5-member engineering team, driving 20+ releases and improving user retention by 65%.

Technical Skills

Backend & Languages: Python, FastAPI, Node.js, TypeScript, AsyncIO, REST, gRPC, WebSockets

Databases: PostgreSQL, Redis, MongoDB, MySQL, Query Optimization, Indexing, Schema Design, ACID Transactions

Systems & Architecture: Microservices, Distributed Systems, Event-Driven Architecture, Caching Strategies, Load Balancing, High Availability, Rate Limiting, API Gateway, Observability

Cloud & DevOps: AWS (ECS, EC2, S3, CloudWatch, Lambda), Docker, Terraform, GitHub Actions, CI/CD, Infrastructure Automation

Testing & Reliability: Pytest, Integration Testing, SLO/SLI Monitoring, Incident Management, Root Cause Analysis

Education

Bachelor of Computer Applications   *2018 – 2021*
Christ University, Bangalore   CGPA: 3.3/4.0

Recognition

- HackBangalore Winner 2024
- AWS Cloud Foundations Certified
- Open Source Contributor

Key Projects

AlgoHabit | AI-Powered Learning Platform *algohabit.com | 200+ Active Users* *Tech Stack: React, TypeScript, Supabase, OpenRouter AI, Razorpay, PWA*

- Engineered React PWA achieving 95+ Lighthouse performance score with offline-first architecture using service workers for 100% offline functionality.
- Integrated OpenRouter AI with intelligent caching layer reducing API costs by 70%, processing 100+ user-uploaded syllabi with 90% accuracy.
- Deployed Supabase backend with RLS securing 5,000+ user records; enabled zero-downtime Razorpay payments.
- Implemented gamification tracking 10,000+ XP transactions, improving 30-day retention by 60%.

Ledgerly | Smart Finance Tracker SaaS *Personal Project* *Tech Stack: FastAPI, React, PostgreSQL, ARIMA, TF-IDF, Pytest*

- Built FastAPI backend with ARIMA time-series forecasting predicting expenses 3 months ahead with 82% accuracy.
- Implemented TF-IDF-based transaction categorization achieving 88% classification accuracy across 50+ categories.
- Developed pytest suite covering 40+ endpoints with 92% code coverage.

AG-WALLET | Agricultural Supply Chain Platform *Android Application* *Tech Stack: Android (Java), MySQL, Google Maps API*

- Built Android app connecting farmers, distributors, and customers for transparent pricing and direct market access.
- Implemented real-time price monitoring enabling farmers to track distributor pricing and maximize profit margins.
- Integrated Google Maps API for location-based distributor discovery and rating system for quality-based selection.

HelpMyBuddy | HackBangalore Winner 2024 *GitHub Link*

- Developed React Native app connecting 100+ homeowners with service providers via geolocation matching within 5km.
- Built Node.js booking system managing 200+ service requests with 99.9% transaction success.