

BHOOBALAN B R

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Professional Summary

Software Engineer with 2+ years of experience specializing in fintech solutions and high-performance distributed systems. Demonstrated success in building scalable customer-facing applications serving 1,000+ daily users with sub-300ms API response times. Expert in cost optimization, achieving 50% reduction in operational expenses through strategic ETL (Extract, Transform, Load) pipeline optimization and infrastructure management. Strong advocate for system reliability with expertise in scalability, availability, performance optimization, throughput enhancement, fault tolerance, resilience engineering, mitigation planning, fail-safe mechanisms, and watchtower monitoring systems. Experienced in managing mission-critical financial applications handling millions in transaction volume daily.

Technical Skills

Core Competencies: Data Structures & Algorithms (Advanced), Object-Oriented Programming, Design Patterns
Languages: Python, JavaScript, TypeScript, SQL, C
Frameworks and Libraries: Node.js, FastAPI, React.js, Vue.js, Laravel
Databases: DynamoDB, PostgreSQL, MySQL, Redis, MongoDB, AWS Aurora, Relational Databases
DevOps and Cloud: AWS (EC2, Lambda, S3, RDS, CloudFront, Glue, CloudWatch), Docker, CI/CD, Proxmox
System Design: Scalability, High Availability, Fault Tolerance, Resilience, Performance Optimization, Throughput
Methodologies: Agile, Scrum, NPS (Net Promoter Score), RESTful APIs, Microservices Architecture
Tools: Git, Grafana, Reverse Proxy, Oracle FlexCube, Cloudflare Realtime SFU, GuardRails

Professional Experience

CodeStax Ai

Jul. 2025 – Present

Software Development Engineer II

Chennai, India

- Spearheaded migration from Dyte to Cloudflare Realtime SFU (Selective Forwarding Unit), resolving critical iOS camera and microphone compatibility issues affecting 100% of mobile users and improving video quality for 35,000+ monthly session minutes
- Engineered high-performance reconciliation ETL pipeline optimization reducing runtime from 8.5 hours to 2.7 hours (68% improvement) through AWS Glue Spark optimization, strategic S3 transfer protocols, and efficient file processing algorithms
- Achieved 50% cost reduction in monthly AWS infrastructure expenses (from \$400 to \$200) through comprehensive resource audit, eliminating unused RDS (Relational Database Service) instances, optimizing 86 Lambda functions, and implementing EC2 cleanup processes
- Deployed alert systems for DEV, UAT (User Acceptance Testing), and production environments using CloudWatch, decreasing mean time to resolution by 45% and improving system reliability

CodeStax Ai

Mar. 2024 – Jun. 2025

Software Development Engineer I

Chennai, India

- Architected enterprise-grade Video Banking System serving 1,000+ daily customers with real-time WebRTC communication, achieving sub-300ms API response times and supporting 10,000+ concurrent users through optimized microservices architecture
- Developed scalable slot management and appointment booking system with scheduled email notifications, improving customer engagement by 45% and reducing manual scheduling overhead by 60%
- Designed Machine Learning-powered cost estimation system using Deepseek-distill-qwen LLM (Large Language Model) with GuardRails integration, reducing operational costs by 40% through intelligent model fine-tuning and prompt optimization
- Resolved critical Content Delivery Network (CDN) firewall restrictions by architecting reverse proxy solution using AWS EC2 and Global Accelerator, improving content delivery speed by 60% and eliminating 99% of access errors

CodeStax Ai

Jun. 2023 – Mar. 2024

Software Development Intern

Chennai, India

- Built responsive frontend interfaces using Vue.js and React.js for real-time appointment booking with NPS feedback integration, achieving 45% improvement in user satisfaction scores
- Established cross-account CI/CD (Continuous Integration/Continuous Deployment) pipelines for multiple repositories, reducing deployment time by 50% and ensuring zero-downtime releases

Education

Bannari Amman Institute of Technology

Bachelor of Engineering in Computer Science and Engineering – CGPA: 8.9/10.0

Erode, Tamil Nadu

Jun. 2020 – Jun. 2024

Key Projects

AWS Aurora Wire Protocol Interceptor | *JS, AWS Aurora, PostgreSQL, Network Protocols* **Jul. 2025 – Aug. 2025**

- Constructed production-grade wire protocol interceptor for AWS Aurora PostgreSQL enabling real-time query monitoring and performance analytics with sub-millisecond overhead, processing 10,000+ queries per second

System Utilization Analyzer | *Python, PostgreSQL, Grafana, Docker, Time-Series DB* **Apr. 2022 – May 2023**

- Established real-time infrastructure monitoring system tracking CPU, memory, and disk utilization across 100+ computers, processing 500,000+ daily metrics with PostgreSQL time-series optimizations and shortening troubleshooting cycles by 45%