Aman Ottakandathil

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Backend Software Engineer with 2+ years of experience building and optimizing Java-based services in cloud-native, distributed systems. Proven track record of improving system performance (up to 60%) and reducing infrastructure costs (20%) through efficient in-memory processing, JVM optimization, and scalable microservice architectures. Strong foundation in API design, testing, reliability, and production-quality delivery, with a keen interest in building secure, fault-tolerant platforms.

EDUCATION

University of Leeds, Leeds, United Kingdom   Sept 2022 - Dec 2023
Master of Science in Advanced Computer Science   Distinction (Grade: 8.1)

Govt. Model Engineering College, Kerala, India   Aug 2016 – Aug 2020
Bachelor of Technology in Computer Science and Engineering   First-Class Honours (CGPA: 8.38)

WORK EXPERIENCE

Dexlock Technologies, *Software Development Engineer*, Kerala, India   Aug 2020 - Sept 2022
- Improved backend query performance by 60% for high-volume queries by designing an optional in-memory processing layer, reducing database access and execution latency for performance-critical workloads.
- Spearheaded migration of backend services from Java 8 to Java 11 with zero production regressions and behavioral stability, ensuring backward compatibility through dependency audits, vulnerability remediation, and regression testing.
- Reduced AWS infrastructure costs by 20% by implementing ECS auto-scaling policies driven by CPU and memory utilization metrics, enabling Java microservices to dynamically scale based on workload demand.
- Strengthened cloud security and compliance by refactoring AWS CloudFormation templates to enforce least-privilege IAM policies, eliminating high-risk permissions and resolving 15+ security vulnerabilities across backend services.
- Optimized JVM memory usage for large datasets, achieving a 50–70% reduction in heap consumption, by implementing Java lazy-loading and object initialization strategies in high-throughput backend services.
- Improved system stability and onboarding efficiency by resolving long-standing production issues (some open for 6+ months) and authoring technical documentation, leading to faster issue resolution and smoother knowledge transfer across teams.

ACHIEVEMENTS

- Awarded Most Valuable Player (Top 2%) for outstanding contributions and top performance in Q4 2021.

PROJECT EXPERIENCE

Terminal Text Editor, *Personal Project*   Jan 2025 - Mar 2025
- Engineered a terminal-based text editor using Java (Java Native Access library), showcasing a strong understanding of text editor internals, including text buffers, cursor movement, state management, and rendering workflows.
- Leveraged rope data structures to improve text manipulation speed, demonstrating up to a 50% performance increase for insertion and deletion in large files.

Service Mesh Tracing Framework, *MSc Final Project*   Jan 2023 - Aug 2023
- Created a Java Spring Boot framework to perform distributed tracing, leveraging Istio service mesh telemetry to monitor microservice traffic, break down call-flow latencies among microservices and visualise collected metrics.
- Researched Kubernetes and service mesh architectures in large-scale clusters, contributing to a measurable reduction in debugging and root-cause analysis time.

Project Management System, *Dexlock Technologies (Internal Project)*   Sept 2020 – Dec 2020
- Designed and implemented a project management system using Node.js to track project information, status, estimated effort, work logs, tasks and bugs, integrating version control for streamlined code management.
- Engineered a scalable and modern frontend using React.js, enabling faster development and easier management of UI states.

SKILLS

Languages: Java, JavaScript, Python, Bash.
Frameworks: Spring Boot, REST APIs, Node.js, React.js, JUnit, Jira, Git, MVC, Maven, Gradle, Agile.
Cloud & DevOps: AWS (EC2, ECS, ECR, Lambda, S3, CloudFormation, Terraform), Kubernetes, Docker, CI/CD, GitHub Actions.
Data & Observability: SQL, NoSQL, MongoDB, Redis, Elasticsearch, Grafana, Prometheus.
Platforms & Interests: Linux.

LEADERSHIP EXPERIENCE

Leeds University Union, *Bar and Venues Supervisor*, Leeds, United Kingdom   May 2024 - Jan 2026
- Demonstrated operational ownership in a high-throughput environment, coordinating daily workflows for 4–8 team members during peak demand, maintaining continuous service availability and handling incidents without service disruption.