# SAISRUJAN PALLA

#### **Software Engineer**

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### **SUMMARY**

Senior Backend Software Engineer with 3 years of experience specializing in Java, Spring Boot, and Python, proficient in designing and deploying scalable microservices. Extensive experience in event-driven architectures, AWS cloud platforms, and containerized deployments using Docker and Kubernetes. Skilled in REST API development, Test-Driven Development (TDD), and implementing CI/CD pipelines with Jenkins. Hands-on experience in React, Hibernate, and relational and NoSQL databases like AWS DynamoDB, RDS, and MongoDB. Strong understanding of messaging technologies and low-level technical concepts such as concurrency and JVM optimization.

#### **EXPERIENCE**

#### Full Stack Intern

#### **GSSL AI**

iii 03/2024 - Present ♀ London

- Developed and deployed event-driven microservices using Java, Quarkus, and RabbitMQ to enhance the scalability and performance of internal services.
- Designed RESTful APIs to support seamless microservice interactions, improving system performance and reducing latency.
- Developed backend modules using JDBC for direct SQL query execution, ensuring high-performance data access and manipulation.
- Implemented custom connection pooling using JDBC, improving database connection efficiency and reducing connection overhead by 25%.
- Implemented Hibernate caching strategies to reduce redundant queries and improve system performance, decreasing database load by 30%.
- Developed highly modular and reusable React components using React Hooks (useState, useEffect) for state and lifecycle management, reducing code duplication by 25% and improving maintainability.
- Integrated AWS DynamoDB for low-latency NoSQL storage, improving query performance for real-time transactional data.
- Leveraged PostgreSQL for relational data storage, implementing indexing and optimization strategies to enhance query execution times.
- Containerized services using Docker and orchestrated deployments via AWS EKS, reducing downtime during scaling operations by 40%.
- Automated CI/CD pipelines with Jenkins and AWS ECR, streamlining deployments and reducing manual intervention.
- Enhanced system observability and monitoring with AWS CloudWatch and Splunk, reducing incident response times by 35%.

#### Software Engineer

### **Cognizant Technology Solutions**

- Developed and deployed distributed microservices using Java, Spring Boot, and Kafka, implementing an event-driven architecture with AWS SQS for reliable communication and improved scalability.
- Implemented RESTful APIs for internal and external services with OAuth 2.0 and JWT, ensuring secure authentication and access control.
- Designed and optimized database interaction using Hibernate ORM, ensuring
  efficient data retrieval and persistence across multiple relational databases.
- Implemented Hibernate caching strategies to reduce redundant queries and improve system performance, decreasing database load by 30%.
- Optimized state management in **React** applications using **Redux**, reducing API call
- redundancies by 30% and improving data flow consistency.

   Implemented **React Router** for client-side routing, improving navigation and
- reducing load times with **SPA** behavior.

   Optimized **React** rendering with **memoization** (React.memo, useMemo) and code-
- splitting (React.lazy), cutting load times by 40% and boosting scalability.
  Optimized AWS RDS for high-volume transactions by improving indexing and schema design, reducing response times by 25%.
- Utilized **MongoDB** to handle unstructured data, implementing efficient sharding and indexing strategies to support dynamic schema evolution.
- Automated CI/CD pipelines with Jenkins and Git, enabling continuous integration and delivery while reducing deployment time by 20%.
- Deployed microservices on Kubernetes clusters with Helm charts, optimizing resource allocation and reducing infrastructure costs.
- Orchestrated service discovery and load balancing with Kubernetes Ingress Controllers, improving availability and reducing latency for critical services.
- Automated infrastructure provisioning with Terraform and AWS CloudFormation, cutting provisioning times by 50% and ensuring environment consistency.
- Monitored application health with **Prometheus** and **Grafana**, improving system visibility and reducing downtime through proactive alerts.
- Worked in Agile teams using Scrum and Kanban methodologies for iterative development and continuous delivery.

## **CERTIFICATION**

**AWS's solutions architect associate** 

Coursera Server-side Development with NodeJS, Express and MongoDB

### **SKILLS**

#### **Programming Languages**

Java, Python, JavaScript, HTML5, CSS

#### Frameworks and Libraries:

Spring Boot, Quarkus, Express, React JS, Node JS, http4k, RESTful APIs, Hibernate, JDBC Swagger, Jackson, Retrofit, Feign, Lombok, Guava, Apache HttpClient, SLF4J, Logback

#### **Developer Tools and Testing**

IntelliJ IDEA, Postman, Eclipse, Gradle, Git, Maven, JUnit, Mockito

### DevOps and Cloud

Jenkins, Gitlab CI, Docker, Kubernetes, AWS (S3, EKS, ECR, CloudFormation, API Gateway, EC2, Fargate, SNS), Terraform, Argo CD

#### **Databases**

MongoDB, PostgreSQL, Oracle, Redis, AWS DynamoDB, AWS RDS, MySQL, NoSQL

## Architecture and Messaging:

Design Patterns, Event-Driven Architecture, Apache Kafka, RabbitMQ, AWS SQS, OAuth, JWT

### Monitoring and Logging

Prometheus, Grafana, Splunk, DataDog, AWS CloudWatch, Elasticsearch

#### **EDUCATION**

#### Master's in Advanced Computing

#### **Birkbeck University London**

iii 10/2023 - 10/2024 ♀ London

# Bachelor's in Computer Science

#### **Amrita Vishwa Vidyapeetham**

苗 04/2017 - 05/2021 👂 Bengaluru , Karnataka

## **PROJECTS**

# Distance In Grid Graphs

 Developed a novel algorithm for calculating distances in grid graphs, reducing the time complexity from O(n^2) to O(n log n), significantly improving computational efficiency.

### Credit Card Management System

- Designed and developed a microservices-based credit card management system using Spring Boot and Kubernetes, ensuring scalability and resilience.
- Increased data integrity by 25% through implementing thread-safe, concurrent transaction processing with synchronized access.
- Utilized Kubernetes Namespaces and Network Policies for secure service isolation and efficient network segmentation.
- Implemented basic fraud detection mechanisms using transaction patterns, helping users identify suspicious activities in their accounts.