Sanjana Achan

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Experience in Software Engineering with 3+ years of expertise in developing SaaS applications, distributed systems, real-time data pipelines, and cloud-based microservices across the full Software Development Life Cycle (SDLC). Solid foundation in object-oriented programming languages, multi-threading, algorithms, and data structures. Proficient in Spring Boot, React.js, TypeScript, AWS, and Kafka, with hands-on experience in software design tools, operating systems, and networking. A collaborative team player with strong analytical, critical thinking, problem-solving, and communication skills, adept at optimizing system performance, implementing CI/CD pipelines, and delivering high-quality software solutions in Agile environments.

TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, C#, Golang, Kotlin.
Frameworks: Spring Framework, Spring MVC, Spring Data JPA, NodeJS, WebSocket, Kafka, Reactjs, Redux, React Hook, GraphQL, Angular.
Web Technologies: TypeScript, JavaScript, HTML, CSS, SASS, Bootstrap, REST APIs, SOAP, JSON, AJAX, XML, Next.js, JQuery, Apache Tomcat.
Databases: PostgreSQL, PostGIS, MySQL, Microsoft SQL Server, MongoDB, Cassandra, Oracle, Redis, DynamoDB, Apache Spark.
Cloud Technologies: AWS (Lambda, S3, EC2, ECS, RDS, API Gateway, CloudWatch), AWS EKS, GCP, Azure (AKS, Azure CLI), Terraform.
DevOps & CI/CD: Jenkins, GitHub, GitLab, AWS CodePipeline, Docker, Azure Kubernetes Service (AKS), Google Kubernetes Engine (GKE).
Testing & Others: JUnit, Mockito, Selenium, Karma, Visual Studio, Linux, MacOS, Windows, Google Tag Manager and Google Ad Manager.

PROFESSIONAL EXPERIENCE

Software Engineer - TIAA, Financial Services **Aug 2024 - Present**

- Developed interactive UIs with React, leveraging Redux for state management, resulting in a 30% improvement in responsiveness and usability.
- Architecture high-performance APIs with Java (Spring Boot) and Node.js, implementing caching strategies and async processing to reduce API response time by 50ms and improve throughput, while optimizing data architecture management employing Spring IoC and AOP.
- Implemented event-driven scalable architecture using Kafka and RabbitMQ, improving data streaming & async processing efficiency by 60%.
- Optimized data retrieval for 500GB+ datasets using PostgreSQL and AWS Redshift, improving analytical query performance by 30%.
- Designed AWS-native backend solutions using EC2, S3, RDS, and API Gateway, implementing serverless AWS Lambda functions for cost-efficient, scalable architectures. Leveraged AKS and EKS for containerization, ensuring 99.9% uptime, auto-scaling, and fault tolerance.
- Implemented comprehensive unit, integration, UAT, and end-to-end testing using Junit and Selenium, ensuring reliable, robust application.
- Streamlined CI/CD pipelines using Jenkins, Gradle, Maven, and Nexus, integrating with AWS CodePipeline to reduce deployment time by 40%.
- Monitored software systems using AWS CloudWatch to detect and troubleshoot technical issues, and security vulnerabilities.
- Collaborated in Agile teams, used Jira to drive sprint planning, conduct root cause analysis, and quality assurance through code reviews.

Software Developer – Research Assistant - George Mason University – NASA-funded project **Aug 2023 – May 2024**

- Enhanced Geoweaver, a resource project management platform, by optimizing data visualization, increasing efficiency for 100+ researchers.
- Developed Python-based ML models for AI-driven insights, optimizing data pipelines with Apache Spark for large-scale big data processing, improving predictive analytics efficiency by 20%.
- Engineered backend services using Python Flask, Spring Boot, and Node.js (Express.js), implementing RESTful APIs to enhance data retrieval.
- Accelerated SPA performance with React, TypeScript, React Router, and responsive design principles to continuously improve client-side rendering and reduce page load times. Optimized PostgreSQL/PostGIS for data storage, increasing query performance for large datasets.
- Deployed serverless microservices on the AWS and maintained CI/CD tools using Jenkins, GitHub Actions, and Docker for build and test automation, reducing deployment failures by 25%. Applied the React Hook Form and Yup, cutting form validation errors by 30%.
- Implemented React components from Figma wireframes, integrating automated unit tests. Leveraged LLM prompts engineering expertise to enhance design documentation while assisting with 5+ research paper publications, meetings, and 10+ academic conferences.

Software Engineer – Infosys, India **OCT 2021 - Jun 2022**

- Built and managed the OMS web application development, enhancing LOE processing and operational efficiency by 25%.
- Constructed a UI/UX with reusable Angular components using TypeScript, HTML5, and CSS3, reducing front-end development time by 30%.
- Integrated backend microservices with Java, J2EE, Spring Boot, Spring MVC, and GraphQL APIs, integrating RBAC to enhance data security.
- Refactored MySQL queries and stored procedures, reducing execution time by 30% and increasing back-end efficiency by 40%. Orchestrated microservices deployment on AWS cloud services and Microsoft Azure (AKS), implementing Infrastructure as Code (IaC) for seamless scalability.
- Managed CI/CD with Jenkins, used Git for source code management, and achieved 95% test coverage with JUnit and Selenium for automated tests and integration in cross-functional Agile development methodologies in Scrum teams, reducing coding and deployment errors by 50%.

Junior Developer - Kony Labs, India **Jan 2021 - Sep 2021**

- Participated in full SDLC using Agile methodology, assisting in user requirements gathering, development, testing, and deployment. Designed interactive user interface with JavaScript, jQuery, AJAX, and Bootstrap, enhancing user experience and cross-device compatibility by 30%.
- Integrated RESTful APIs RAML and SOAP web services exercising MVC Framework, Hibernate, and JAX-WS, reducing request failures by 25%.
- Implemented OAuth 2.0 authentication and JMS queues for asynchronous messaging, strengthening API security and reducing unauthorized access by 40%. Enhanced SQL and Oracle relational databases design optimization using optimal queries and DML/DDL statements.
- Conducted API testing using Postman for reliability, and utilized Log4j, and Splunk for application logging, system integration, and debugging.
- Maintained CI/CD pipelines using Maven, Ant, Jenkins, and Git, streamlining deployment processes and improving software delivery efficiency.

EDUCATION

George Mason University - Master of Science (Computer Science) GPA: 3.77 **2024**