Aditya Singh

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Summary

Backend Software Engineer with 2+ years of experience designing scalable, high-performance distributed systems. Skilled in building fault-tolerant, high-throughput services using NodeJS, messaging queues (like Kafka or RabbitMQ), and distributed caching systems like Redis or Memcached. Experienced with CI/CD pipelines and containerized deployments. Proven ability to drive end-to-end feature ownership, improve system reliability, and deliver measurable business outcomes while mentoring teammates and leading architectural initiatives.

Skills

Languages : Assembly, C/C++, JavaScript, Python,TypeScript, Ruby, Java, HTML, CSS
Databases : MongoDB, MySQL
Libraries/Frameworks : Angular, ReactJS, NodeJS, NestJS, ExpressJS, Fastify, Springboot, Ruby on Rails, Django, Flask, FastAPI, CUDA
Tools: Git, Linux, JIRA, Postman, Jenkins, Sonarqube, AWS, Azure, GCP
Others: AI/ML, GenAI, OOPs, System Design, Design Patterns, SDLC, Data Structures, Agile, Waterfall, Scrum, Kanban
Soft Skills: Teamwork, Resilience, Communication, Problem Solving, Leadership

Experiences

EPAM Systems — April 2024 – Present

Software Engineer — *Hyderabad, Telangana*

- Contributed to a new E-commerce microservices architecture design, helping implement a component that reduced data processing latency by 30% for our most active users.
- Implemented a centralized logging and error handling module in NestJS, which improved system observability and cut the team's debugging time for production issues by over 50%.
- Integrated both REST and GraphQL APIs from BigCommerce within a serverless workflow using NestJS and Azure Functions, creating a robust backend for processing high-volume e-commerce transactions.
- Upgraded and refactored over 41 components from React 16 to 18, achieving a 20% reduction in application load times and enabling the use of modern features.
- Collaborated with cross-functional teams to refactor legacy services into modular microservices, improving scalability and deployment independence across multiple domains.
- Enhanced API performance by introducing request-level caching using Redis and optimizing database query patterns, resulting in a 25% drop in response times.
- Integrated CI/CD workflows using Jenkins and SonarQube, improving code quality visibility and reducing release cycle time by 30%.
- Developed internal monitoring utilities leveraging Azure Application Insights to track real-time service metrics and proactively identify anomalies.
- Worked closely with architects to design event-driven flows using Kafka for asynchronous data synchronization between services, improving system resilience and throughput.
- Improved unit testing coverage across applications to **92%**, reducing bugs by **50%** and meeting project quality standards.

Altizon Systems — July 2023 – Oct 2023

Software Engineer — *Pune, Maharashtra*

- Developed responsive data analysis dashboards with Apex Charts, cutting user bounce rates by 25% and improving data accessibility for stakeholders.
- Optimized backend performance by designing and implementing RESTful Ruby APIs with aggregation functions, reducing dashboard data query times by 30%.
- Improved application performance and stability by resolving 50+ critical bugs, focusing on memory leaks and inefficient database queries.
- Refactored legacy frontend code by migrating jQuery-based views to React components, reducing maintenance overhead and improving reusability.
- Collaborated with QA and DevOps teams to automate build and deployment pipelines, cutting release preparation time by 40%.
- Implemented secure API authentication and role-based access control (RBAC), ensuring data integrity and compliance with organizational standards.

Projects

AI-based Real Time Deciphering of British Sign Language | *Python, OpenCV, TensorFlow/Keras (final year project)*
This project uses Deep Learning models and Computer Vision to translate British Sign Language (BSL) into written English in real time. Developed with Python, OpenCV, and an LSTM-based neural network built in TensorFlow/Keras, it processes live video streams to identify and interpret sequential hand landmarks. The system instantly converts recognized gestures into text, enabling seamless communication between sign language users and non-signers. Designed to improve accessibility, it offers potential applications in education, customer service, and assistive technology. A research paper based on this work was published in the American Institute of Physics Conference.

Multithreaded Kernel | *C / C++ | Assembly (Individual Project)*
This project is an operating system kernel written in C and C++, designed to support concurrent execution of multiple tasks through multithreading. By implementing core concepts such as process management, scheduling, and synchronization, it serves as both a learning resource and an experimental platform for understanding how operating systems work at a low level. The project demonstrates the relevance of multithreading in improving system responsiveness and resource efficiency, concepts central to modern computing devices and embedded systems in the real world.

Achievements

- Microsoft Certified: Azure Administrator Associate
- AWS Certified: Solutions Architect Associate
- Codeforces (Specialist)
- AWS Badge: Serverless
- Research Paper (AI/ML)
- GCP Badges: (Qwiklabs)

Education

VIT, Pune, B.Tech in Electronics **August 2019 – 2023**
CGPA : 8.48, Courses: OOPs, C++, Python, JavaScript, SQL, Machine Learning, ReactJS, OS *Pune, Maharashtra*