

# ADITYA SINGH

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## Summary

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Full-Stack Software Engineer with 2+ years of experience designing scalable, high-performance distributed systems. Skilled in building fault-tolerant, high-throughput services using Node.js and React, with experience in messaging queues (Kafka, RabbitMQ) and distributed caching systems like Redis and Memcached. Proficient in developing modern, responsive frontends and robust backends, supported by 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

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**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, Object Oriented Programming, Operating Systems, System Design, Design Patterns, SDLC, [Data Structures](#), [Agile](#), [Waterfall](#), [Scrum](#), [Kanban](#)

**Soft Skills:** Teamwork, Resilience, Communication, Problem Solving, Leadership

## Experiences

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### 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.
- Implemented secure API authentication and role-based access control (RBAC), ensuring data integrity and compliance with organizational standards.
- Collaborated with QA and DevOps teams to automate build and deployment pipelines, cutting release preparation time.

## Projects

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### [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

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

## Education

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### [VIT, Pune](#), **B.Tech in Electronics**

*CGPA : 8.48, Courses: OOPs, C++, Python, JavaScript, SQL, Machine Learning, ReactJS, OS*

**August 2019 – 2023**

*Pune, Maharashtra*