# RAKESH KUMAR

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### EXPERIENCE

Software Engineer Dec 2022 – Present

CarDekho

- Gurgaon
- Architected high-performance notification system using Google Pub/Sub; enhanced system reliability to handle peak loads of 97,000 notifications/hour, reducing delivery failures by 73%.
- Spearheaded key aspects of Node.js backend development; collaborated with DevOps team on system architecture, reducing average page load time from 3.7 seconds to 2.8 seconds across high-traffic pages.
- Engineered crucial features for new market expansion project using Nest.js and Fastify; optimized database queries and API endpoints, handling 437 concurrent users with sub-189ms response times.
- Developed comprehensive role management system with tiered access levels; implemented custom authorization logic, reducing unauthorized
  access attempts by 89% and improving overall system security.
- Revamped PDF generation service; engineered a dedicated microservice solution, reducing average report generation time from 42 seconds to 11 seconds, supporting over 13,700 monthly downloads.

**Engineer** Dec 2021 – Dec 2022

Mindtree

- Bengaluru
- Constructed comprehensive Java Selenium framework; incorporated page object model, data-driven testing, and parallel execution, resulting in 61% task automation and 48% faster testing cycles.
- Orchestrated integration of 5+ RESTful APIs; introduced circuit breakers and retry mechanisms, enhancing functionality by 59% and increasing user satisfaction by 22%.
- Established robust security measures in web forms; conducted regular security audits, preventing 98% of common vulnerabilities for 5000+
  users.
- Guided team of 10 interns; designed and led training programs, resulting in 40% skill increase and 3 full-time job offers.

Trainee Engineer Sep 2020 – Mar 2021

KloudGin

- Hyderabad
- Integrated ArcGIS feature in Angular; refined map rendering and devised custom controls, achieving 39% faster visualization and 28% quicker queries for 10,000+ daily active users.
- Built internal AWS QuickSight tool using Java and AWS SDK; formulated data preprocessing and custom visualizations, reducing manual effort by 46% for 20 analysts and saving 120+ hours monthly.
- Crafted PoCs using QuickSightSDK and agGrid; streamlined data retrieval for 1M+ records, boosting customer interaction by 27% and securing 3 new enterprise clients.

## **KEY PROJECTS**

## Real-time Analytics Dashboard | React, D3.js, WebSocket, Node.js

 Developed a real-time analytics dashboard processing 1M+ events/hour; utilized WebSocket for live updates and D3.js for interactive visualizations, reducing decision-making time by 40% for business stakeholders.

# Microservices Migration | Node.js, Docker, Kubernetes, RabbitMQ

• Led decomposition of monolithic application into microservices; executed event-driven architecture using RabbitMQ, deployed on Kubernetes, resulting in 50% faster feature deployments and 99.95% service availability.

### Web Vulnerability Simulation | Angular, TypeScript, Node.js, Docker

• Produced interactive OWASP Top 10 vulnerability platform; replicated real-world scenarios, adopted by 3 universities, reaching 500+ students with 4.8/5 satisfaction rating.

## **EDUCATION**

#### Chandigarh University

Punjab, India

Bachelor of Engineering in Computer Science

Aug 2017 - May 2021

 Developed ML-based predictive maintenance system for industrial equipment as final year project; achieved 92% accuracy in fault prediction, potentially reducing downtime by 30% in simulated scenarios.

## TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, Python, Java, C/C++, SQL

Frontend: React, Angular, Vue.js, HTML5, CSS3, SCSS, Redux, WebPack, Babel

Backend: Node.js, Express.js, NestJS, Django, Flask, Spring Boot

Databases: MongoDB, MySQL, PostgreSQL, Redis, Cassandra, Elasticsearch

Cloud & DevOps: AWS (EC2, S3, Lambda, RDS, CloudFront), GCP, Azure, Docker, Kubernetes, Jenkins, GitLab CI

Testing & Monitoring: Jest, Mocha, Selenium, Cypress, JUnit, Prometheus, Grafana

Tools & Methodologies: Git, JIRA, Confluence, RESTful APIs, GraphQL, Microservices, Agile/Scrum, TDD