Rohan Katale

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Education

Indian Institute of Information Technology, Pune

B. Tech in Computer Science & Engineering

2022 - 2026 *CGPA:* 7.61/10

Projects

Microservices-Based Quiz Application — Java, Spring Boot, Maven, Eureka

Source Code

- Developed a scalable microservices quiz app using Spring Boot and Spring Cloud (Eureka, Gateway, OpenFeign), featuring distinct services for Questions, Quizzes, API Gateway, and Service Registry.
- Engineered RESTful APIs for CRUD operations on questions and quiz lifecycle management; integrated PostgreSQL using Spring Data JPA and used Feign for inter-service communication.
- Ensured robust service discovery with Eureka and managed API traffic with Spring Cloud Gateway for routing load balancing; validated code with JUnit.

Event Booking API — Golang, Gin, SQLite, JWT

Source Code

- Developed a robust event booking API using Golang and the Gin framework, with SQLite for data persistence and JWT for secure authentication.
- Designed and implemented RESTful endpoints for user management, event lifecycle, and booking operations (registration/cancellation).
- Integrated middleware for JWT-based authentication and password hashing (bcrypt), ensuring secure API access and data integrity.
- Architected the application with a clean, modular structure (routes, models, middleware, utilities) for scalability and maintainability.

Cloud Threat Detection Using Machine Learning — AWS, bash, Python, ML

- Developed a real-time Intrusion Detection System (IDS) for AWS, utilizing Python, TensorFlow, Keras, Scikit-learn (for PCA), and an ANN for threat classification.
- Simulated DoS (Hulk), DDoS (Metasploit), and SQLi (SQLMap) attacks on a live AWS EC2 instance; captured traffic with 'tcpdump' and extracted 80 network flow features using CIC-FlowMeter.
- Deployed the ANN model for real-time anomaly detection on EC2, achieving 98.24% accuracy (with PCA) and 17.4% faster inference, with automated SMTP email alerts for critical threats.

Technical Skills

Languages: Java, Go, Python, C++, JavaScript

Backend Technologies: Spring Boot, Spring Cloud (Eureka, Gateway, OpenFeign), Maven, Golang, Gin

Frontend Technologies: React, Tailwind CSS, HTML, CSS

Databases: PostgreSQL, MySQL, MongoDB, SQLite Cloud Platforms: AWS (EC2), Google Cloud Platform

Developer Tools: Git, GitHub, Docker, Postman, VS Code, CIC-FlowMeter

Key Concepts/Coursework: Linux, Data Structures Algorithms, OOP, DBMS, Operating Systems,

Computer Networks, Software Engineering, Cryptography Network Security

Achievements and Certifications

5th Place, Devstorm BITS Goa Hackathon

Secured 5th place in Devstorm BITS Goa Hackathon, contributing to frontend development and showcasing technical
expertise in software development.

Top 7% on TryHackMe Platform, Level 8

• Demonstrated strong cybersecurity skills and expertise through hands-on challenges and exercises.

Solved over 150+ problems of DSA on LeetCode.

FLY-Scholar (Finding the Leader in You) Program

• Completed a program to develop non-cognitive skills including conscientiousness, innovativeness, taking initiative, perseverance, and problem-solving.

Google Cybersecurity Professional Certificate

• Completed eight courses developed by Google, demonstrating proficiency in Python, Linux, SQL, SIEM tools, and IDS, with knowledge of Cybersecurity risks, threats, and mitigation techniques.