

Rayan Crasta - Backend Software Engineer

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Visa: Graduate Visa till December 2026

Summary

Results-oriented backend software engineer with extensive experience in system design and development, particularly in payment solutions and API integrations. Proficient in building scalable applications using modern technologies. Strong communicator with a passion for delivering high-quality solutions and optimizing performance in collaborative environments. Seeking to contribute to innovative teams focused on enhancing digital payment experiences.

Work Experience

Tata Consultancy Services – Assistant Systems Engineer (Full Time)

June 2021 – Aug 2023, Mumbai, India

- Developed bash scripts to automate the hardening process of over 100+ Linux servers for compliance based on CIS benchmarks, saving 900+ hours of manual compliance hours. Won “Best Team” award for the same.
- Conducted security analysis on Angular and Spring Boot codebases using Checkmarx and Fortify WebInspect, identifying and mitigating critical vulnerabilities.
- Integrated third-party antimalware and data tokenization solutions into the existing architecture.
- Conducted manual web application security testing using OWASP ZAP and Burpsuite, identifying and addressing critical vulnerabilities, thus enhancing application security.
- Collaborated with cross-functional teams to design and implement APIs for service-oriented architectures, ensuring seamless communication with third-party providers.

Qustac Technologies Pvt. Ltd - Android Development Intern (Part Time)

Mar 2020 – Jan 2021, Mumbai, India

- Developed an Android application using Android Studio and Java, integrating TensorFlow Lite for real-time classification of explicit and non-explicit images on Android devices.
- Integrated a streamlined machine learning model to facilitate automatic actions upon detecting explicit content within image files.

Projects

TweetOps: Twitter-like Tweet Ingestion and Search Backend [Blog](#) | [GitHub](#)

- Developed a Twitter-like backend prototype using Go, FastAPI, Kafka, PostgreSQL, and Elasticsearch.
- Managed a dataset of 500K tweets, categorized by language, and ingested into Elasticsearch via Kafka.
- Utilized Elasticsearch for real-time tweet search and immediate availability of ingested tweets.
- Created user and tweet search functionalities with PostgreSQL and Elasticsearch, including pagination.
- Developed a FastAPI service for flagging profane tweets based on a model, integrated into the ingestion process for safe search.

MyShowSeat: Booking Service Backend [Blog](#) | [GitHub](#)

- Developed a booking service backend prototype using Go, Redis, and PostgreSQL.

- Implemented booking logic for seat checks, claiming, payment verification, and finalization, ensuring a seamless user experience during high traffic.
- Utilized Go's concurrency for asynchronous processing, maintaining data integrity with PostgreSQL transactional operations and row-level locking.
- Enhanced performance with Redis caching for seat availability, reducing database calls and improving scalability. Incorporated JWT token-based authentication for secure service access.

Debate Management System (Dissertation Project)

- Designed a platform for managing structured debates in academic settings, incorporating gamification, quizzes, and real-time feedback.
- Built using React.js for responsive UIs and FastAPI for backend logic, with PostgreSQL for authentication and MongoDB for debate storage.
- Utilized Redis for real-time tracking and WebSockets for live updates during debate sessions.
- Provided detailed post-debate analytics to help educators enhance teaching strategies.

Education

University of Leicester

MSc Cloud Computing (Sept 2023 - 2024)

Mumbai University

Bachelor of Engineering, Information Technology (2021), 9.42 CGPA

Skills

- **Languages:** Go, Python, FastAPI, Bash, JavaScript, Java, Django, ReactJS
- **Databases:** PostgreSQL, MongoDB, Redis
- **Infra:** Linux, Docker, Kubernetes, AWS, EKS
- **Tools:** Kafka, Elasticsearch, Prometheus, Grafana, JIRA
- **Security:** Burpsuite, Checkmarx, WebInspect, OWASP ZAP

Soft Skills

- Strong communication and teamwork abilities
- Problem-solving mindset with a focus on user experience
- Adaptability and eagerness to learn new technologies