

Rayan Crasta - Software Engineer

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Summary

Dynamic software engineer with a strong foundation in system design, software development, and database management, particularly in Go. Eager to leverage technical skills to build scalable and high-performance applications. Committed to delivering quality solutions, driving innovation, and collaborating effectively in team environments. Seeking opportunities to contribute to cutting-edge projects in the tech industry.

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.
- Engaged in discussions to enhance services and overall architecture, contributing to team codebases and collaborating with product teams.

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, Django, Bash, JavaScript, Java, ReactJS
- **Databases:** PostgreSQL, MongoDB, Redis, DynamoDB
- **Infra:** Linux, Docker, AWS, EKS
- **Tools:** Kafka, Elasticsearch, Prometheus, Grafana
- **Security:** Burpsuite, Checkmarx, WebInspect, OWASP ZAP
- **Soft Skills:** Strong communication, teamwork, problem-solving, adaptability, and attention to detail.