

# Rayan Crasta - Software Engineer

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## Summary

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Dynamic software engineer with solid experience in Python, system design, software development, and database management. Eager to leverage technical expertise to build containerized IT infrastructure and high-performance applications, delivering top-quality solutions and driving innovation in collaborative team environments. Passionate about testing and test-driven development, and seeking opportunities to grow professionally while making a meaningful impact in the tech industry.

## Work Experience

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### **Mint People** - Front of House Staff & Kitchen Porter (Part Time)

*May 2024 – Aug 2024, UK*

- Provided exceptional customer service in restaurants and clubs, handling reservations, seating, and resolving inquiries.
- Supported kitchen operations through dishwashing, food prep, and maintaining cleanliness.

### **Hap Solutions** - Festival and Bar Staff (Part Time)

*June 2024 – Aug 2024, UK*

- Delivered excellent customer service at festivals and events, managing bar operations.

### **Royal Mail** – Warehouse Operative (Part Time)

*Nov 2023 – Dec 2023, Northampton, UK*

- Loaded/unloaded shipments and sorted items efficiently to optimize workflow.

### **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 work. Recognized with the “Best Team” award for the initiative.
- 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 to enhance security.
- Conducted manual web application security testing using OWASP ZAP and Burpsuite, identifying and addressing critical vulnerabilities, thus improving application security.

### **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.
- Streamlined the machine learning model to facilitate automatic actions upon detecting explicit content within image files.

## Projects

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### **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**

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### **University of Leicester**

*MSc Cloud Computing (Sept 2023 - 2024)*

### **Mumbai University**

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

## **Skills**

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- **Languages:** Python, Go, FastAPI, Django, Bash, JavaScript, Java, ReactJS
- **Databases:** PostgreSQL, MongoDB, Redis
- **Infra:** Linux, Docker, Kubernetes
- **Tools:** Jenkins, Kafka, Elasticsearch, Prometheus, Grafana, JIRA
- **Security:** Burpsuite, Checkmarx, WebInspect, OWASP ZAP
- **Soft Skills:** Strong communication, teamwork, problem-solving, attention to detail, adaptability, and a passion for continuous learning.