# Rayan Crasta - Software Engineer

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## **Summary**

Dynamic software engineer with a keen interest in software development and a strong foundation in system design, software development, and database management. Eager to apply technical skills and problem-solving abilities to develop innovative solutions in a collaborative team environment. Committed to continuous learning and seeking opportunities to grow professionally while making a meaningful impact in the tech industry.

## **Work Experience**

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

May 2024 - Aug 2024, UK

- Provided exceptional customer service in restaurants and clubs, managing reservations, seating, and resolving inquiries with strong communication skills.
- Supported kitchen operations through dishwashing, food prep, and maintaining cleanliness, demonstrating organizational skills and attention to detail.

Hap Solutions - Festival and Bar Staff (Part Time)

June 2024 – Aug 2024, UK

• Delivered excellent customer service at festivals and events, effectively managing bar operations and ensuring customer satisfaction.

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

Nov 2023 – Dec 2023, Northampton, UK

• Loaded/unloaded shipments and sorted items efficiently to optimize workflow, meeting strict deadlines and demonstrating reliability.

**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.

**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, guizzes, 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
- Infra: Linux, Docker, Kubernetes, Openshift
- Tools: Kafka, Elasticsearch, Prometheus, Grafana, JIRA
- Security: Burpsuite, Checkmarx, WebInspect, OWASP ZAP
- **Soft Skills**: Strong communication, problem-solving, teamwork, adaptability, and a readiness to learn new technologies and programming methodologies.