

# Rayan Crasta - Software Engineer

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## Summary

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Dynamic software engineer with a strong foundation in software development, database management, and system design. Eager to leverage technical skills in Java programming and database technologies to contribute to data management solutions for spacecraft development. Committed to fostering a collaborative team environment while driving innovation through creative problem-solving. Seeking an internship opportunity to enhance professional growth and make 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, showcasing strong teamwork and communication skills.

### **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*

- Efficiently loaded/unloaded shipments and sorted items to optimize workflow, demonstrating strong organizational skills and attention to detail.

### **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, enhancing system security.
- 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.
- Implemented a streamlined machine learning model to facilitate automatic actions upon detecting explicit content within image files, showcasing problem-solving skills and technical

proficiency.

## 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, demonstrating strong programming and database skills.
- 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, enhancing user experience.
- 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, ensuring a seamless user experience during high traffic.
- Implemented booking logic for seat checks, claiming, payment verification, and finalization while 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:** Java, Go, Python, FastAPI, Django, Bash, JavaScript, ReactJS
- **Databases:** PostgreSQL, MongoDB, Redis
- **Infra:** Linux, Docker
- **Tools:** Kafka, Elasticsearch, Prometheus, Grafana
- **Security:** Burpsuite, Checkmarx, WebInspect, OWASP ZAP
- **Soft Skills:** Strong communication, teamwork, problem-solving, adaptability, attention to detail, project management skills