Rayan Crasta - Software Engineer

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Summary

Dynamic software engineer with a solid foundation in system design, software development, and database management. Eager to leverage my programming skills in Python and SQL to contribute to quantitative development and build efficient tools for analyzing structured credit instruments. Committed to delivering high-performance applications and driving innovation in collaborative team environments. Seeking a challenging role to grow professionally and make a meaningful impact in the finance and 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, handling reservations, seating, and resolving inquiries with a focus on client satisfaction.
- Supported kitchen operations through dishwashing, food prep, and maintaining cleanliness, demonstrating attention to detail and teamwork.

Hap Solutions - Festival and Bar Staff (Part Time)
June 2024 – Aug 2024, UK

- Delivered excellent customer service at festivals and events, managing bar operations effectively and ensuring a positive experience for attendees.

Royal Mail – Warehouse Operative (Part Time)
Nov 2023 – Dec 2023, Northampton, UK

- Loaded/unloaded shipments and sorted items efficiently to optimize workflow, showcasing 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 overall system security.
- Conducted manual web application security testing using OWASP ZAP and Burpsuite, identifying and addressing critical vulnerabilities, thus enhancing application security.
- Collaborated effectively with cross-functional teams to address technical issues and improve existing systems, demonstrating strong communication skills.

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, showcasing

my programming and analytical skills.
- 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 - Expected 2024)

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

Skills

- **Languages**: Python, Go, SQL, VBA, FastAPI, Django, Bash, JavaScript, Java, ReactJS
- **Databases**: PostgreSQL, MongoDB, Redis
- **Infra**: Linux, Docker
- **Tools**: Kafka, Elasticsearch, Prometheus, Grafana
- **Security**: Burpsuite, Checkmarx, WebInspect, OWASP ZAP
- **Soft Skills**: Proactive problem-solving, strong communication, teamwork, adaptability, attention to detail