Ammar Ahmed, Software Engineer

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LINKS

Linkedin

PROFILE

Aspiring software engineer, with an absolute passion for building scalable products and services, best practices around system design and architecture, scalability, robustness, and security. Forward-focused, disciplined, a team player, with an aim to progress the professional career by attaining a position as an individual contributor, and ascend in the managerial direction.

EMPLOYMENT HISTORY

Jun 2021 — Present

Software Engineer, Bazaar Technologies — Karachi

- **Order Journey Mapping and Delivery Orders**
  - Played a major role in the comprehensive overhaul of the entire Order life-cycle by introducing the concept of Delivery Orders.
  - Mapped the complete Order life-cycle, identifying dependencies across multiple domains and designed and implemented a new Order life-cycle, incorporating the concept of Delivery Orders to accommodate the one-to-many relationship between Order and Delivery Orders seamlessly.
  - Utilized Kafka Events and gRPC as the primary communication channels between microservices, ensuring efficient and real-time data flow.
  - This in turn, improved the last mile costs that Bazaar was facing and affected important metrics such as last mile cost per item, per mile and per vehicle.
- **Paiyya - Gamification hub**
  - Ideated the infrastructure and the scalibility of this microservice which provided the flexibility to create games with their own set of rules, eligibility criteria and for any segment of users.
  - Adopted and implemented East-West (service-to-service) communication to reduce requests latency and count between game-service and order-service.
  - Implemented custom alerts for observability of API load using micrometer which was later visualized on Grafana. Used the implemented custom alerts to manage memory and CPU load/capacity.
  - Also implemented DLQ (Dead Letter Queue) which allowed retrieval of erroneous and failed events, subsequently maintain data consistency.
  - Followed extreme programming (XP) practices such as TDD and pair programming very strongly throughout the development.
- **Recommendation System**
  - Developed a recommendation system using the FP-Growth algorithm to identify and rate the occurrences of products frequently bought together.
  - Stored and managed transactional data (where each transaction is a set of products) processed by the algorithm in Amazon S3 which was accessed by an aggregator service.
  - Generated product recommendations based on identified buying patterns (item/product sets) and recommendation rules.
  - Created and scheduled a cron job to run daily, ensuring data updates. The cron job allowed to process new orders placed after the last update cycle and identified frequently bought-together products from new orders. It then updated the processed data on S3 for continuous improvement of recommendations.

RESEARCH AND PUBLICATIONS

Feb 2021

- **Visual Landmarks Recognition of Urban Structures Using CNN**
  - Inspired by VPS (Visual Positioning System), addressing how the need arises for the detection and classification of local urban buildings, which tend to hold similar features in contrast to monuments with unique features.
  - Published Paper.

EDUCATION

Aug 2017 — May 2021

BSCS, Habib University — Karachi, Pakistan.

SKILLS	Java	MongoDB
	Kotlin	Golang
	Spring Boot	Docker
	Kafka	Kubernetes
	Python	AWS

HOBBIES	Table Tennis, Violin, Travelling, Books and Poetry.