Industrial Oriented Mini Project

DineLogic: A 3-Tier Cloud-Native Architecture for Restaurant Analytics and Consumer Discovery

Team 13 (CSE-B)

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Abstract

The rapid expansion of online food delivery platforms such as Swiggy has generated extensive restaurant performance data, enabling data-driven decision-making in the food service industry. This project presents the development of a cloud-based three-tier web application for restaurant analytics using AWS infrastructure. The system integrates a MySQL database for structured data storage, a Flask-based REST API for backend services, and a responsive frontend interface hosted on Amazon S3. The dataset, sourced from Kaggle and based on Swiggy restaurant listings, was cleaned and processed to analyze metrics such as ratings, review counts, pricing patterns, and location-based distribution. Analytical queries were performed to identify performance trends and competitive intensity across different areas. The architecture ensures scalability, security, and efficient communication between components deployed on EC2 and RDS. The system provides actionable insights for entrepreneurs and stakeholders, supporting strategic decisions related to pricing, location selection, and overall restaurant performance optimization.

Thank You.