SYMBIOSIS INSTITUTE OF TECHNOLOGY (SIT)

B.Tech Project Poster AY 2025-26

Project ID: 01

Project Title: BUSINESSLENS - SMART SAAS ANALYTICS DASHBOARD

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Celebrating 50 Years of Excellence

ABSTRACT

BusinessLens is an intelligent SaaS-based analytics platform designed for businesses to provide real time analytics, data visualization, and AI-powered recommendations. The system is developed using the MERN stack and integrates OpenAI with Stripe for billing automation and data processing.

AIM & OBJECTIVE

To build an AI-powered system that automates data understanding, cleaning, and insight generation from structured business data without requiring technical expertise.

BusinessLens

1. Smart File Upload & Auto-Parsing
Accepts raw CSV or Excel files and automatically parses rows and columns to detect structure.

2. Column Header Correction with LLMs
Uses OpenAI to identify and correct misnamed or missing headers based on content understanding.

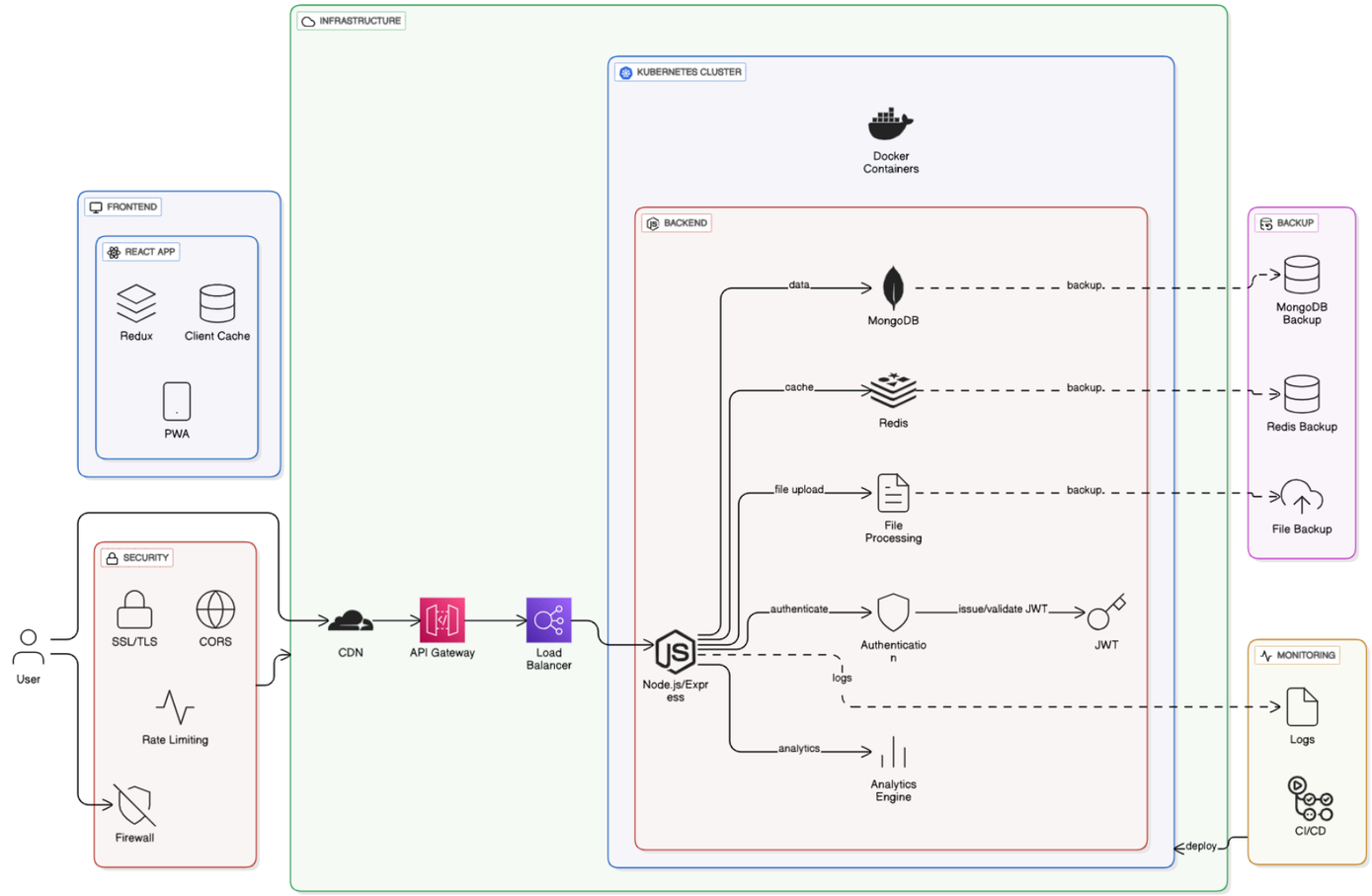
3. Automatic Data Cleaning
Detects and corrects common data issues like nulls, formatting inconsistencies, and type mismatches.

4. Semantic Column Classification
Classifies columns (e.g., metrics, dimensions, time) using contextual cues and LLM-based inference.

5. Business Insight Generation
Converts cleaned and structured data into useful business insights and summaries in plain English.

6. Dynamic Chart & Visualization Suggestion
Recommends appropriate chart types (e.g., bar, pie, line) based on the data's nature and distribution.

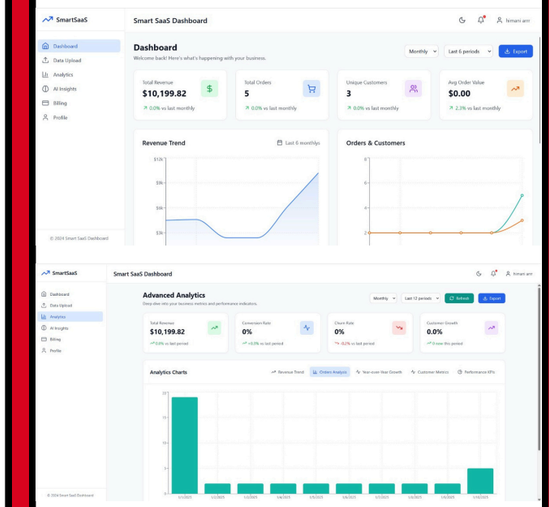
METHODOLOGY



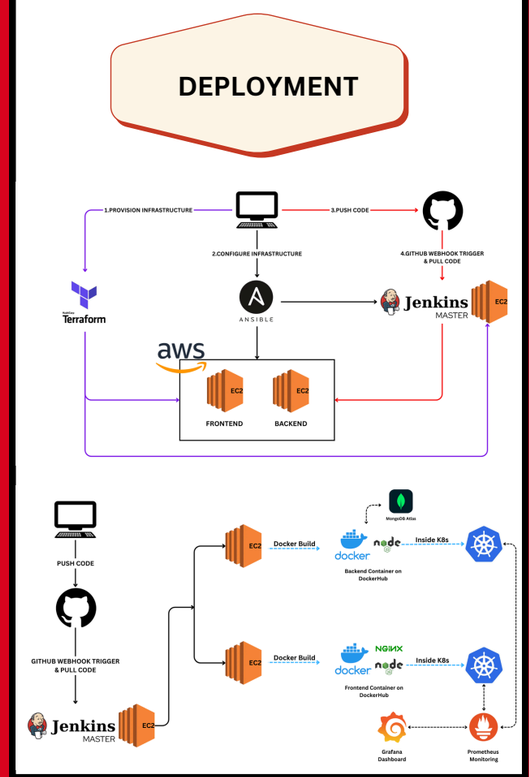
TECH

- **Design:** Figma
- **Frontend:** HTML, CSS, Tailwind CSS, ReactJS
- **Database:** MongoDB
- **Backend:** JS, NodeJS, ExpressJS
- **Version Control:** Git/Github
- **DevOps:** Docker, K8s, Terraform, Ansible, Prometheus, Grafana, Jenkins
- **AIML and Tools:** OpenAI, Postman
- **Cloud:** AWS, Render

RESULTS



DEPLOYMENT



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[1] J. Jiang, K. Zhou, Z. Dong, K. Ye, W. Zhao, and J. Wen, "StructGPT: A General Framework for Large Language Model to Reason over Structured Data," in Proc. EMNLP, 2023, pp. 9237–9251. [Online]. Available: https://aclanthology.org/2023.emnlp-main.574.pdf

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[3] M. Parciak, B. Vandevoort, F. Neven, L. Peeters, and S. Vansummeren, "Schema Matching with Large Language Models: an Experimental Study," Jul. 2024. [Online]. Available: https://arxiv.org/abs/2407.11852