Project Design Phase-II
Data Flow Diagram &
User Stories

Date	18 October 2023
Team ID	Team-592731
Project Name	Walmart Sales Analysis For Retail Industry With Machine Learning
Maximum Marks	4 Marks
Team Members	Akshara Daram Dereddy Venkata Yogitha S. Chethan Manish

Data Flow Diagram for Diabetes Prediction using ML:

Level 0(Industry Standard) :

Data Flow Diagram - Walmart Sales Analysis
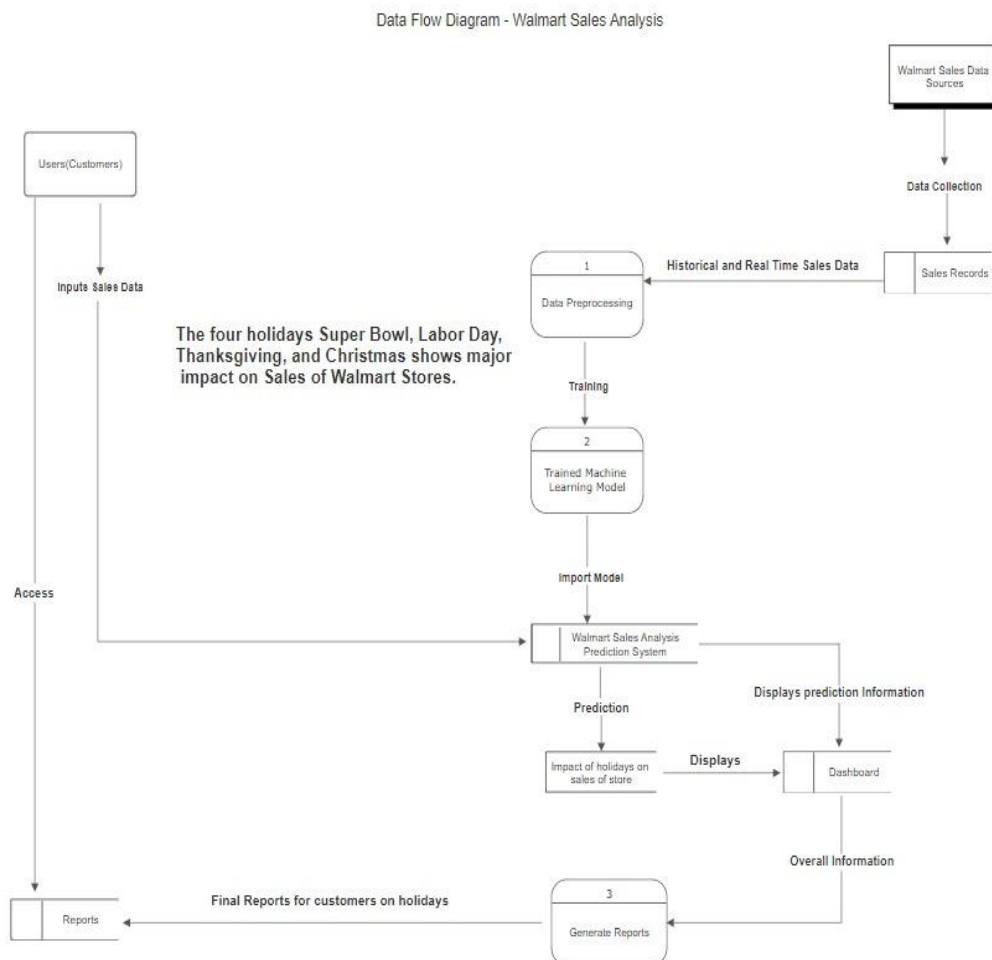
User Stories:

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Store Manager	Sales Prediction	US01	As a store manager, I want to predict the sales for the next month to optimize inventory and staffing.	- The model must predict sales with 90% accuracy based on historical data. - Predictions should be available at least 7 days before the start of the month.	High	1.0
Inventory Analyst	Demand Forecasting	US02	As an inventory analyst, I want to receive demand forecasts for each product category, so I can adjust stock levels accordingly.	- Forecasts must be generated for each product category. - Forecasts should be updated weekly and have a margin of error within 5%.	High	1.0
Marketing Team	Customer Segmentation	US03	As a member of the marketing team, I want to identify customer segments to tailor promotions and marketing campaigns.	- The system should segment customers into at least three distinct groups based on purchase behavior. - Segmentation results should be updated monthly.	High	1.0
Data Analyst	Sales Performance Reporting	US04	As a data analyst, I want access to historical sales data and performance reports to analyze trends and make data-driven decisions.	- Access to historical sales data for the past 5 years. - Ability to generate performance reports with customizable date ranges and filter options.	Medium	1.1
Inventory Manager	Stock Replenishment	US05	As an inventory manager, I want the system to automatically generate restocking orders when stock levels are below a certain threshold.	- The system should create restocking orders for products when stock falls below the defined threshold. - Order recommendations should consider lead times and supplier availability.	High	1.1
Regional Director	Regional Sales Comparison	US06	As a regional director, I want to compare the sales performance of different regions to identify growth opportunities and challenges.	- Ability to compare sales data across multiple regions. - Visualizations and reports highlighting regional performance differences.	Medium	1.1
Data Scientist	Anomaly Detection	US07	As a data scientist, I want to develop machine learning models that can automatically detect anomalies in sales data, such as unusual spikes or drops.	- The system should provide access to historical data for training anomaly detection models. - Models should detect anomalies with at least 90% accuracy.	High	1.2
CFO	Profit Margin Analysis	US08	As the CFO, I want to analyze the profit margins for different products and categories to make informed financial decisions.	- Profit margins should be calculated and visualized for each product and product category. - Ability to filter and compare profit margins over time.	High	1.2