BUSINESS REQUIREMENTS DOCUMENT
<E-COMMERCE SALES PREDICTION PROJECT >

VERSION: 1.0

DATE <<2024-07-25 >>

VERSION AND APPROVALS

VERSION HISTORY

Version #	Date	Revised By	Reason for change
1.0	2024-07-25	Mohammad pasha	Initial version

DOCUMENT APPROVALS

Approver Name	Project Role	Signature/Electronic Approval	Date
Jennifer	Project Sponsor	Garima Singh	24-07-2024
Alfred M	Project manager	Alfred	24-07-2024

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PROJECT DETAILS

Project Name	E-commerce Sales Prediction
Project Type	***New Initiative***
Project Start Date	July 1, 2024
Project End Date	July 15, 2024
Project Sponsor	BSLE Blue Spring liaison Elite
Primary Driver	Efficiency
Secondary Driver	Strategic Planning
Division	Data Analytics
Project Manager	Garima Singh

OVERVIEW

This document defines the high-level requirements for the E-commerce Sales Prediction project. It will be used as the basis for the following activities:

- Creating solution designs
- Developing test plans, test scripts, and test cases
- Determining p
- roject completion
- Assessing project success

DOCUMENT RESOURCES

<Complete or insert Stakeholder Map>

Name	Business Unit	Role
Rayan K	**Data Analytics**	Data Scientist
Ayann Sharma	**Marketing**	Marketing Analyst
Michiel	**Finance**	Financial Analyst
Ksyim	**IT**	IT support

GLOSSARY OF TERMS

Term/Acronym	Definition
Arima	Autoregressive Integrated Moving Average
MSE	Mean Squared Error
MAE	Mean Absolute Error

PROJECT OVERVIEW

4.1 Project Overview and Background

5.1 Project Overview and Background

This project aims to develop a predictive model for forecasting the next 12 months' sales for our e-commerce platform. The current challenge is the lack of accurate sales predictions, which impacts inventory management, marketing, and financial planning. The project will address this by leveraging historical sales data and employing the ARIMA model for forecasting.

4.2 Project Dependencies

- Historical sales data accuracy and completeness.
- Collaboration with IT for data integration

4.3 Stakeholders

The following comprises the internal and external stakeholders whose requirements are represented by this document:

	Stakeholders
1.	Internal: Data Analytics Team, Marketing Team, Finance Team, IT Support.

KEY ASSUMPTIONS AND CONSTRAINTS

5.1 Key Assumptions and Constraints

#	Assumptions
	List any assumptions the requirements are based on
	Historical sales data is accurate and complete.
	ARIMA model parameters (5, 1, 0) are suitable for our sales data.

	Timely feedback and support from stakeholder
#	**Constraints**
	List any constraints the requirements are based on
	Project must be completed within the stipulated time frame
	Limited availability of IT resources for data integration.

Use Case Narrative

Use Case ID:	01		
Use Case Name:	Sales Data Loading and Integration		
Created By:	Syed mohammad Pasha	Last Updated By:	Data Analytics
Date Created:		2024-07-01	

Actors:	Data Scientist, IT Support
Description:	Load and integrate datasets related to orders, payments, products, reviews, and customers.
Preconditions:	Access to historical sales data.
Postconditions:	Comprehensive dataset ready for analysis
Normal Course:	Data Scientist requests data from IT. IT Support provides access to the required datasets. Data Scientist loads and integrates the datasets.
Alternative Courses:	None
Exceptions:	Data access issues.
Includes:	
Priority:	High
Frequency of Use:	Once
Business Rules	Data should be accurate and free from duplicates.
Special Requirements:	Data should be accurate and free from duplicates.
Assumptions:	Data is stored in a structured format.
Notes and Issues:	Ensure data privacy compliance.

BUSINESS REQUIREMENTS

The following sections document the various business requirements of this project.

General / Base

REQ#	PRIORITY	DESCRIPTION	RATIONALE	USE CASE
1	Critical		Essential for model development	1

		Load and integrate sales-related datasets		
2	Critical	Develop ARIMA model with parameters (5, 1, 0)	Identified as suitable for sales forecasting	1
3	High	Evaluate model performance using MSE and MAE	Ensure accuracy of predictions	1
4	Medium	Visualize actual vs. predicted sales data	Facilitate understanding of model performance	1
5	High	Document and present findings and insights	Communicate results to stakeholder	1

Security

REQ#	**PRIORITY**	**DESCRIPTION**	**RATIONALE**	**USE CASE**
1	High	Secure handling of data	Protect sensitive information	1

Reporting

REQ#	**PRIORITY**	**DESCRIPTION**	**RATIONALE**	**USE CASE**
1	High	Generate monthly sales forecast reports	Provide actionable insights	1

Usability

REQ#	**PRIORITY**	**DESCRIPTION**	**RATIONALE**	**USE CASE**
1	Medium	Ensure model and results are interpretable by analysts	Facilitate ease of use and understanding	1

Appendix B – Business Rules Catalog

Business Rule Name:	Data Accuracy Rule Data Privacy Rule
Identifier	BR1 BR2
Description	All data must be accurate and free from duplicates Data must be handled according to privacy regulations
Example	N/A
Source	Data Team Legal Team
Related Rules	N/A

Appendix C- Models

Use Case Field Name	Definition
Use Case ID	01
Use Case Name	▪ : Sales Data Loading and Integration
Created By	Syed mohammad pasha quadri
Actors	Data Scientist, IT Support
Description	Load and integrate datasets related to orders, payments, products, reviews, and customers.
Preconditions	▪ Access to historical sales data. ▪ IT support available for data extraction.
Post conditions	▪ Comprehensive dataset ready for analysis.
Normal Course	▪ Data Scientist requests data from IT. ▪ IT Support provides access to the required datasets. ▪ Data Scientist loads the datasets into a data analysis environment. ▪ Data Scientist integrates the datasets into a single comprehensive dataset. ▪ Data Scientist verifies the integrity and completeness of the data
Alternative Courses	If IT support is not available, the Data Scientist accesses backup datasets. If data is found to be incomplete, the Data Scientist notifies IT for data correction.
▪ Exceptions	▪ **Exception 1**: Data access issues prevent loading the datasets. **Exception 2**: Datasets contain significant errors or discrepancies.
Priority	High
Frequency of Use	Once per Project
Business Rules	Data should be accurate and free from duplicates.
Special Requirements	Secure data handling practices.
Assumptions	Data is stored in a structured format.
Notes and Issues	Ensure data privacy compliance during the proces