**Project Charter: Sales Analytics Dashboard**

**Project Title:Sales Analytics Dashboard: Insights and Forecasting**

**Project Manager:**

Mohammad Malik Moin Siddique

**Project Team:**

* Data Analysts
* Business Intelligence Experts
* Software Developers
* Sales and Marketing Analysts

**Project Purpose & Justification:**

In today’s competitive business environment, understanding sales trends, forecasting future performance, and identifying top-performing products are crucial for strategic decision-making. This project leverages data analytics and visualization techniques to uncover key sales trends, product performance, distribution patterns, and future predictions using historical sales data. By implementing statistical modeling and forecasting, this project aims to improve decision-making, enhance profitability, and optimize sales strategies**.**

**Project Objectives:**

1. **Analyse Sales Trends Over Time** – Track monthly sales trends and compute a moving average for better insights.
2. **Identify Top-Performing Products** – Recognize which products generate the highest revenue.
3. **Analyse Sales Distribution** – Understand variations and patterns in sales data.
4. **Forecast Future Sales** – Use **Exponential Smoothing Models** to predict future sales.
5. **Support Business Decision-Making** – Provide actionable insights for sales, inventory, and marketing strategies.

**Project Scope:**

**In-Scope:**

* Data collection and processing of sales transactions.
* Cleaning and analyzing historical sales data.
* Implementing statistical models for forecasting future sales.
* Visualizing data trends, product performance, and distribution.
* Providing a structured dashboard with interactive analytics.

**Out-of-Scope:**

* Real-time sales tracking.
* Advanced machine learning-based predictive models beyond exponential smoothing.
* Specific marketing or inventory management strategies.

**Deliverables:**

* **Sales Trends Analysis** (Line graphs showcasing sales fluctuations and moving averages).
* **Top-Performing Product Analysis** (Bar charts highlighting the best-selling products).
* **Sales Distribution Graphs** (Histograms for understanding sales frequency).
* **Sales Forecasting Model** (Exponential smoothing predictions for future trends).
* **An interactive dashboard** summarizing key findings.

**Constraints:**

* Availability and completeness of sales data.
* Accuracy of sales forecasting dependent on historical trends.
* Time limitations for data processing and visualization.

**Assumptions:**

* Sales data accurately represents real-world business performance.
* Historical sales patterns are indicative of future sales behavior.
* The chosen statistical models provide reliable insights.

**Risks:**

* **Data Quality Issues** – Missing or inconsistent data may impact analysis.
* **Model Accuracy Limitations** – Forecasting methods depend on historical trends, which may not always predict sudden changes.
* **Business Strategy Misalignment** – The insights provided should be validated with business goals before implementation.

**Stakeholders:**

* Sales and marketing teams.
* Business analysts and strategists.
* Executive leadership and decision-makers.
* IT and data science teams.

**Project Timeline & Milestones:**

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| **Milestone** | **Estimated Completion** |
| Data Collection & Cleaning | Week 1 – 2 |
| Exploratory Data Analysis | Week 3 |
| Sales Trend Visualization | Week 4 |
| Product Performance Analysis | Week 5 |
| Sales Forecasting Model Development | Week 6 |
| Final Review & Dashboard Presentation | Week 7 |

**Success Criteria:**

The project will be considered successful if:  
✔ Sales trends and product performance are clearly visualized.  
✔ Future sales trends are forecasted using **exponential smoothing** models.  
✔ Insights help business teams optimize sales strategies.  
✔ The final dashboard provides clear, data-driven decision support.

* Market Trends: Helps businesses adjust pricing and promotional strategies.