

Project Synopsis

Project Name: Madhav Ecommerce Sales Dashboard

NAME: NARESH NAGAR
STUDENT ID: AF0418444
BATCH NO.: ANP-C8337
CENTER CODE: MPAXB

NOVEMBER 7, 2024

ANUDEEP ORGANIZATION ACCENTURE INDUSTRY BASED TRAINING

1.Title

Madhav E-commerce Sales Dashboard

2.Introduction

- The Madhav E-commerce Sales Dashboard project focuses on building an insightful and interactive dashboard using Power BI, enhanced by Python libraries like Pandas and Matplotlib for data manipulation and custom visualizations.
- The goal is to provide actionable insights into key performance indicators, sales patterns, and customer behaviors for Madhav E-commerce to support strategic decision-making.

3.Objectives

- To visualize core sales metrics and KPIs using Power BI.
- To incorporate Python-based data analysis with Pandas for data transformation and aggregation.
- To utilize Matplotlib within Power BI to create custom visualizations for more nuanced insights.
- To support data-driven decisions by identifying trends, high-performing products, and profitable customer segments.

4.Scope of Work

- Data Preparation: Loading and preprocessing e-commerce data in Power BI using Python (Pandas).
- Dashboard Creation: Building Power BI visualizations and integrating custom Matplotlib charts where needed.
- Analysis: Performing state-level profit analysis, customer segmentation, and trend analysis using both Power BI's native tools and Python scripts.
- Excluding detailed logistic or warehouse analytics in this scope.

5.Methodology

- 1.Data Loading: Import data into Power BI and use Python (Pandas) for additional cleaning and manipulation.
- 2.Data Processing: Use Pandas for advanced data manipulation, including handling missing values, and aggregating data for insights.
- 3.Dashboard Design: Create Power BI visuals and integrate Matplotlib for custom graphs.
- 4.Analysis: Perform trend analysis, customer profiling, and Category segmentation.

6.Modeling

- Implement descriptive statistics for summary insights.
- Create time series analysis for tracking sales patterns.
- Utilize clustering for customer segmentation , using Python in Power BI.

8.Tools and Technology

1. Data Processing: Python (Pandas for data manipulation)
2. Visualization: Power BI with embedded Matplotlib for custom visuals
3. Database: Integration with data sources CSV files

9.Expected Outcomes

- A dynamic Power BI dashboard with integrated Python-based custom visualizations for enhanced analytical depth.
- Insights on state-level profits, customer behavior trends, and seasonal sales patterns.
- Actionable data points for strategic business decisions and performance optimization.

10.Timelines

Week 1-2: Data Collection and Cleaning (Power BI & Python)

Week 3: Dashboard Design and Matplotlib Visualization Integration

Week 4: Testing and Iteration

Week 5: Final Review and Deployment

Conclusion

The Madhav E-commerce Sales Dashboard will provide a robust, Python-enhanced analytical platform within Power BI, enabling Madhav E-commerce to leverage in-depth sales insights and improve operational strategies.