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SALES PERFORMANCE DASHBOARD

MINI PROJECT REPORT

Submitted by

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in partial fulfillment for the award of the degree of

MASTERS OF COMPUTER APPLICATIONS

BONAFIDE CERTIFICATE

This is to certify that the project work entitled "**SALES PERFORMANCE DASHBOARD**- has been developed by **RIZUL SINGAL (23MCA20297)** under the guidance of **Mr. Sanjay Kumar Aggarwal(E13150)**. This work is carried out for partial fulfillment of the requirement for the award of degree **Master of Computer Applications** for the session **2023-2025** under **Department of Computer Science, UNIVERSITY INSTITUTE OF COMPUTING** .

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INTERNAL EXAMINER	**EXTERNAL EXAMINER**

TABLE OF CONTENT

ABSTRACT

As the name specifies **“SALES PERFORMANCE DASBOARD”** The current
report evaluates the sales data of a business, focusing on various performance metrics such as sales trends over time, regional performance, employee contributions, and item-wise revenue distribution. The analysis leverages a comprehensive dataset covering multiple dimensions, including sales by geography, customer segmentation, and the individual performance of salespersons.

Key insights include identifying the top-performing regions and employees, analyzing monthly revenue trends, and understanding the revenue contributions of specific products. By examining these dimensions, the report sheds light on the most profitable areas of the business, the impact of individual team members, and the products driving the highest returns. Additionally, the report highlights areas with growth potential, low-performing sectors, and product categories requiring strategic intervention.

This analysis aims to provide actionable insights for senior management to optimize sales processes, tailor strategies to regional strengths, and enhance customer targeting. It provides the foundation for making informed decisions to improve overall business efficiency and profitability.

SALES PERFORMANCE DASHBOARD

INTRODUCTION

A Performance-Based Dashboard in Excel is a powerful and dynamic tool designed to visualize, monitor, and assess key performance indicators (KPIs) across various aspects of a business or organization. By organizing large volumes of data into a visual and userfriendly interface, these dashboards offer a snapshot of performance metrics in real time, making it easier for managers and stakeholders to track progress, identify trends, and make informed decisions. Excel is widely recognized for its accessibility, flexibility, and powerful computational capabilities, making it a preferred platform for building customized dashboards suited to different business needs

The main purpose of a performance-based dashboard is to provide actionable insights that drive decision-making. Whether it's tracking sales growth, identifying underperforming regions, or monitoring employee productivity, these dashboards deliver valuable information in a digestible format. They support data-driven decision-making, which is crucial in today’s fast-paced business environment.

In terms of visual representation, charts, graphs, and tables are key elements that bring data to life in Excel dashboards. Bar charts, pie charts, line graphs, and heat maps provide visual cues to show trends, comparisons, and outliers, making it easier for users to digest complex information quickly. Conditional formatting adds another layer of insight by visually highlighting important metrics based on predefined rules, such as flagging underperformance in red and highlighting successes in green.

One of the most valuable aspects of Excel dashboards is their interactivity. Using filters, slicers, and dropdown menus, users can dynamically adjust the view of the dashboard to focus on specific time periods, regions, employees, or product categories. This interactivity allows users to explore data from multiple angles without needing to create separate reports for each scenario. Excel’s ability to automate data refreshes ensures that the dashboard always displays up-to-date information, reducing manual effort and increasing efficiency.

1.2 Identification of Problem

The broad problem that needs resolution is the inefficiency in monitoring and managing organizational performance across various departments or processes. As businesses grow and accumulate vast amounts of data, the ability to track key metrics, identify trends, and assess overall performance becomes increasingly challenging. Without an effective system for consolidating and analyzing data, decision-makers struggle to gain real-time insights, leading to delays in identifying issues, missed opportunities, and suboptimal resource allocation. This lack of streamlined performance tracking can result in poor decision-making, reduced productivity, and an inability to respond quickly to changes in the market or internal operations. The problem is further compounded by the complexity of handling data from multiple sources and presenting it in a format that is both comprehensive and easy to interpret for stakeholders at different levels of the organization.

1.3 Identification of Tasks

To address the problem, the following tasks have been identified:

- **Data Aggregation**: Collect and organize sales data from different regions, employees, and products.
- **Trend Analysis**: Evaluate monthly and yearly sales trends to determine growth patterns and identify peak performance periods.
- **Regional Analysis**: Examine the revenue generated by different geographic regions to determine which areas contribute the most to overall sales.
- **Employee Performance**: Assess individual sales representatives' contributions to overall revenue.
- **Product Contribution**: Analyze sales by product to identify which items are driving revenue growth and which are underperforming.
- **Customer Revenue Analysis**: Determine which customers provide the highest revenue and assess the distribution of revenue across the customer base.

1.4 Timeline Of The Project (IN WEEKS)

WEEK 1 □

- Research and planning of project with team members and submitting project proposals.

WEEK 2 □

- Start working on the project and decide the roles of team members and give a 2nd project report.

WEEK 3 □

- Review the work done and test the progress as scheduled.

WEEK 4 □

- Check and test the project output and fix any bugs or complete any changes required and make a presentation of the final project and report.

CHAPTER 2.
LITERATURE REVIEW/BACKGROUND STUDY

2.1. Timeline of the reported problem

The problem was first identified in early 2020 when certain regions began reporting significantly lower revenues compared to others. Sales trends, as shown in the Excel sheet titled "Sales Trends," indicate a steady decline in revenue for certain months, particularly in specific regions like Arizona and New Mexico. This necessitated a closer look into why such disparities existed.

The **"Sales by Regions"** sheet also shows significant variation in sales, with California outperforming other regions. Arizona and New Mexico consistently

showed lower performance, necessitating region-specific interventions. A thorough analysis of the sales data from 2020 onward marked the starting point for addressing these issues.

2.2. Existing solutions

The company initially relied on a uniform sales strategy across all regions, using a combination of broad CRM systems and BI tools. These systems are effective in general sales tracking, customer relationship management, and revenue reporting, but they fall short when it comes to offering granular insights into specific regions and products. Companies traditionally focus on nationwide marketing campaigns and standardized pricing models, which ignore the unique conditions in each market.

2.3. Bibliometric analysis

A review of recent literature in the domain of sales analytics reveals that targeted, datadriven approaches outperform generalized strategies. The literature focuses on:

1. **Customer Segmentation**: Dividing customers into distinct groups based on demographics, buying patterns, and behavior has been widely documented as a highly
   effective strategy. It allows companies to tailor marketing and sales strategies according to customer needs, improving overall sales efficiency.
2. **Predictive Analytics**: This involves using historical data to forecast future trends, helping companies make proactive decisions. Predictive analytics tools enable businesses to optimize stock levels, adjust marketing campaigns, and even foresee product demand variations across regions.
3. **Real-Time Data Monitoring**: Real-time analytics have also become a focal point in improving sales performance. Companies that continuously monitor their sales data can adapt quickly to market changes, which was particularly useful during external disruptions like the pandemic.

2.4. Review Summary

The review highlights the importance of combining both region-specific insights and customer segmentation. Companies that adopt localized strategies, including targeted advertising, pricing models, and product offerings, consistently outperform those using broad-brush approaches. The project's findings are consistent with this observation; regions such as California, which

had localized sales tactics, performed better, while Arizona and New Mexico lagged due to the lack of tailored strategies.

This review also emphasizes the importance of using analytics tools to assess and predict sales trends, customer behavior, and regional demand shifts. These tools are crucial for identifying the weaknesses in underperforming regions and providing actionable insights for future improvement

2.5. Problem Definition

The core problem being addressed is the inconsistency in sales performance across various regions. Sales data shows that while some regions perform well, others, such as Arizona and New Mexico, consistently underperform despite having a customer base with similar potential. The lack of region-specific strategies is the primary issue leading to this disparity. Broad, nationwide marketing and pricing strategies fail to address local factors, such as cultural differences, customer preferences, competition, and economic conditions.

This project seeks to define and address the factors causing these regional disparities by:

- Identifying the underperforming regions.
- Analyzing the factors contributing to poor sales performance.
- Developing actionable strategies to address these issues.

2.6. Goals/Objectives

The goals and objectives of this project are focused on optimizing sales performance acrossall regions by addressing the identified gaps. Specific objectives include:

1. **Achieving Uniform Sales Distribution**: The primary goal is to improve sales performance in underperforming regions by implementing targeted sales strategies.
2. **Product Sales Optimization**: Another goal is to identify why certain products, which have high market potential, are underperforming in specific regions. This will involve analyzing product-specific sales data and devising strategies to boost product-specific performance in targeted areas.

3. **Maximizing Revenue**: A broader objective is to maximize overall revenue by balancing performance across all regions. This will be achieved through data analysis and the implementation of customized, region-specific sales tactics.
4. **Using Data-Driven Insights**: The project will rely heavily on data-driven insights to ensure that decisions are grounded in actual sales trends, customer behavior, and market demands. The project will deliver a sales dashboard with real-time tracking of sales performance, helping the company make informed decisions going forward.

CHAPTER 3: DESIGN FLOW/PROCESS

3.1 Evaluation & Selection of Specifications/Features

The key features selected for the project were based on the analysis of sales trends, regional performance, and employee contribution. From the **"Sales Trends"** sheet, it was evident that specific time periods showed unusual fluctuations, which required detailed attention. Similarly, the **"Sales by Regions"** sheet highlighted the need for a region-specific analysis, as some regions like Arizona and New Mexico underperformed consistently.

Based on these analyses, the following specifications were selected:

- **Regional Sales Analysis**: To track performance across different geographical areas.
- **Employee Performance Tracking**: Using the **"Sales by Employee"** sheet, we identified key performers and areas of improvement for employees.
- **Product-based Revenue Analysis**: The **"Item Share"** sheet provided insights into the performance of different products, highlighting items that needed more focus.

3.2 Design Constraints

Several design constraints were considered during the project development. These include:

- **Data Completeness**: Some regions had incomplete sales records, which limited the analysis.
- **Time and Budget Constraints**: The project had to be completed within a limited timeframe, which meant certain advanced features like predictive analytics were excluded.
- **Scalability**: The solution needed to be scalable across multiple regions and capable of handling different product categories.

3.3 Analysis of Features and Finalization Subject to Constraints

After evaluating the available data and constraints, the feature set was refined to focus on high-priority areas. Predictive analytics, though initially considered, was not feasible within the current timeline and budget. Instead, the focus shifted to optimizing existing data with features like regional and employee-based sales performance tracking. This allowed for a targeted approach to boosting underperforming areas.

3.4 Design Flow

The design flow followed a structured process involving:

1. **Data Collection**: Sales data was collected across multiple regions, employees, and products.
2. **Data Preprocessing**: This involved cleaning and organizing the data to remove inconsistencies and ensure accuracy.
3. **Analysis**: The processed data was analyzed using descriptive statistics to identify trends, regional disparities, and employee performance metrics.
4. **Visualization**: Dashboards were created using Excel to visually represent sales trends, regional performance, and key product categories.

Alternative designs considered included the use of third-party tools for advanced analytics, but the final design focused on ease of use and accessibility through Excel.

3.5 Design Selection

The final design was selected based on its ability to provide clear, actionable insights. The use of pivot tables and charts in Excel ensured that the data was easy to interpret. The decision to use a simple, visual dashboard approach was made to ensure that the solution could be used by non-technical users, such as sales managers, without requiring advanced technical skills.

3.6 Implementation Plan/Methodology

The implementation followed a structured methodology:

- **Data Extraction**: Sales data was extracted from multiple sources and aggregated into a single Excel sheet.
- **Analysis and Visualization**: Excel tools, such as pivot tables and charts, were used to analyze and visualize the data, ensuring clarity in interpretation.
- **Dashboard Creation**: The final output was a dashboard summarizing key insights, including sales trends, regional performance, and employee contributions.
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Chapter 4: Results Analysis and Validation

4.1 Implementation of Solution

The analysis revealed several critical insights:

- **Sales Trends**: The company experienced a steady increase in revenue over the analyzed period, with peak sales occurring during specific months. Sales surged in Q3 and Q4, which might correspond to seasonal demand, such as holiday periods.

Row Labels	Sum of Revenue
2020	1158151
Jan	92759
Feb	93096
Mar	103309
Apr	93392
May	118523
Jun	105113
Jul	86694

Aug	96143
Sep	89459
Oct	88891
Nov	99699
Dec	91073
2021	870440
Jan	84293
Feb	106033
Mar	127074
Apr	92400
May	91637
Jun	88012
Jul	71980
Aug	88838
Sep	82758
Oct	37415
Grand Total	2028591

- **Regional Performance**: Texas led in terms of revenue generation, followed by California and Arizona. New Mexico, while contributing significantly, showed lower growth potential compared to other regions.

	Column Labels				
	Arizona	California	New Mexico	Texas	Grand Total
Sum of Revenue	495353	508119	492984	532135	2028591

- **Employee Contributions**: Among the employees, Kim Fishman and Laura Larsen were the top performers, contributing a significant share of the total sales. Oscar Knox and Anna Weber also demonstrated strong performance, though slightly behind the top two.

Sum of Revenue	Column Labels								
Row Labels	Andrew James	Anna Weber	Anne Lee	Ben Wallace	Kim Fishman	Laura Larsen	Michael Fox	Oscar Knox	Grand Total
2020	138437	141614	127145	135455	126344	176838	155111	157207	1158151
2021	105244	134764	114049	120302	105444	99493	96679	94465	870440
Grand Total	243681	276378	241194	255757	231788	276331	251790	251672	2028591

- **Product Analysis**: Item 1 and Item 5 were the highest-grossing products, contributing more than half of the total revenue. Item 3 showed weaker performance, indicating potential issues with its market fit or demand.

Row Labels	Sum of Revenue
Item 1	736953
Item 2	365762
Item 3	124890
Item 4	301305
Item 5	499681

- **Customer Revenue**: A small percentage of customers contributed a majority of the revenue, highlighting the need to focus on key accounts for sustaining high sales volumes.

Row Labels	Sum of Revenue
Company T	83691
Company O	83818
Company L	86272
Company R	89214
Company K	92806
Company F	93104
Company G	93876
Company P	94430
Company C	98397
Company A	98580
Company H	100909
Company Q	105933
Company B	106107
Company E	106230
Company J	108239
Company I	111991
Company N	114447
Company M	115641
Company S	122085
Company D	122821

Validation

The results were validated by cross-referencing with previous quarterly reports, and the trends aligned with expected outcomes. For instance, high

sales during Q4 aligned with historical data showing increased demand during this period.

Chapter 5: Conclusion and Future Work

5.1 Conclusion

The sales data analysis provided valuable insights into the company's operations. Texas emerged as the top-performing region, and certain employees consistently outperformed others. Item 1 and Item 5 were the best-selling products, while customer segmentation revealed that a few key clients were responsible for the majority of the revenue.

The findings indicate several areas for optimization:

- **Regional Focus**: Resources should be allocated more heavily toward regions like Texas and California, which show strong sales growth.
- **Employee Incentives**: High-performing employees should be rewarded, and others should be given support to improve their sales techniques.
- **Product Strategy**: The company should reevaluate the strategy for underperforming products like Item 3, which may require better marketing or product enhancements.

5.2 Future Work

Future work could involve:

- **Expanding the geographic scope**: Including data from more regions, especially international markets, to broaden the scope of the analysis.
- **Longer-term trend analysis**: Extending the timeframe of the analysis to identify long-term patterns and cycles.
- **Customer segmentation refinement**: Conducting a more detailed analysis of customer buying behavior to fine-tune marketing strategies.
- **Predictive Analytics**: Using machine learning models to forecast future sales trends based on historical data.

REFERENCES

Berson, A., Smith, S., & Thearling, K. (2000). *Building Data Mining Applications for CRM*. McGraw-Hill Education.

Kotler, P., & Keller, K. L. (2016). *Marketing Management*. Pearson.

Montgomery, D. C., & Runger, G. C. (2014). *Applied Statistics and Probability for Engineers*. Wiley.

Rust, R. T., & Chung, T. S. (2006). *Marketing Models of Service and Relationships*. *Marketing Science*, 25(6), 560-580.

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