



BUSINESS ANALYTICS

<https://v-s32.github.io/Business-Analytics/>

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PROJECT DESCRIPTION

This project aims to analyze business performance by leveraging the provided data. The focus areas include purchase patterns, inventory management, business optimization, and sales strategy enhancement.

The goal is to optimize inventory and operations, improve sales strategies, assess the impact of pricing on sales, and evaluate overall business performance.

DATASET OVERVIEW

The analysis utilized three key tables:

1. **Products:** Provides insights into the product offerings and price structures.
2. **Orders:** Maintains a comprehensive record of sales transactions, including order dates, product IDs, and quantities sold, forming the backbone of sales analysis.
3. **Property Info:** Contains location details of properties purchasing from the business, helping to relate customer purchasing behaviour to geographic locations and identify market opportunities by region.

METHODOLOGY

The project utilized PostgreSQL to query and analyze the database, as well as store the results. Visualization was performed using Power BI. The main steps of this project are summarized in the flowchart.

Data Cleaning

Manipulate datasets, eliminate duplicates, and resolve missing values

Data Exploration

Understand the datasets to identify relevant columns and relationships essential for the analysis

Database Analysis

- ❑ Use PostgreSQL to write queries that address each business and metric question.
- ❑ Apply appropriate aggregate functions, joins, rank, and groupings to extract meaningful insights from the data.

Result / Visualizations

Visualize results using Power BI

RESULTS

The query results were stored and visualized on a Power BI dashboard.

- ❑ The query result can be found here - <https://github.com/V-S32/Business-Analytics/tree/bef5a198250d31f3b083b245f0e7e9619d0d7477/query>
- ❑ The Power BI dashboard can be found here - <https://github.com/V-S32/Business-Analytics/tree/bef5a198250d31f3b083b245f0e7e9619d0d7477/Power%20BI%20dashboard>

Insights & Recommendations

- ❑ There was **no significant increase in revenue** from 2015 to 2016, indicating a need for strategic changes.
- ❑ **Furnishings and Public Areas** are top-performing categories, and the business can leverage this success to increase revenue.
- ❑ Reevaluate marketing strategies for low-performing items or consider discontinuing them.
- ❑ Optimize inventory by location, ensuring preferred products are well-stocked to avoid shortages and overstock.
- ❑ The relationship between price and sales is weak, indicating that price is not the sole driver and other factors influence purchasing decisions.
- ❑ Prepare for peak sales in **May and November** with increased stock and targeted promotions.

Thank
you!