Project Report

Data-Driven Innovations In Supply Chain Management With Qlik Insights

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Abstract

This project aims to revolutionize supply chain management through data-driven insights using Qlik. Leveraging advanced analytics, it seeks to optimize logistics, forecasting, and inventory management, enhancing operational efficiency and responsiveness.

This transformative project endeavors to reshape the landscape of supply chain management by harnessing the power of Qlik's data-driven insights. Employing cutting-edge analytics, it strives to revolutionize key facets such as logistics, forecasting, and inventory management, with the overarching goal of elevating operational efficiency and responsiveness to new heights.

Introduction

Qlik Sense Desktop is a robust data analytics and visualization tool that allows users to create interactive and informative dashboards. This project leverages Qlik Sense Desktop to :

- Create visualizations to showcase the demographic distribution of Supply chain management
- Analyze how Data-Driven Innovations in Supply Chain Management have impacted social programs, financial inclusion, and other key areas.
- Explore any correlations between usage and improvements.
- Analyze how Data-Driven Innovations in Supply Chain Management have affected businesses, especially in sectors like banking, telecommunications, and e-commerce.
- Evaluate the impact of Data-Driven Innovations in Supply Chain Management on sales, customer onboarding, and operational efficiency.

Setup and Installation

Creating an Account and Downloading Qlik Sense Desktop

Login and Account Creation:

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1. Access the Qlik Sense website(https://www.qlik.com/us/try-or-buy/download-qlik-sense) and create a new account.

2. Download the Qlik Sense Desktop unlock file.

File Placement:

1. Navigate to the directory: `C:\Users\username\Documents\Qlik\Sense\trial`.

2. Paste the downloaded desktop unlock file in this directory.

Launching Qlik Sense Desktop:

1. Open the Qlik Sense Desktop application.

2. App Creation and Data Upload

Create a New App and Upload Data:

Create a New App:

1. Click on the "Create App" button to start a new project.

Upload the Data File:

1. Go to Skill Wallet and download the project flow data set.

2. In Qlik Sense, upload this data set into the new app.Ensure the dataset is embedded correctly to use the

first row as headers if it is not done automatically.

Data Collection & Extraction From Database

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, evaluate outcomes and generate insights from the data

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Understanding the data:

Data contains all the meta information regarding the columns described in the CSV files

Column Description of the Dataset:

- Type: Type Count
- Days for shipping (real): Product shipment days
- Days for shipment (scheduled): product getting prepared for shipment
- Benefit per item: profit earned per product
- Sales per customer: No of products purchased by the customer
- Delivery: Products delivery date.
- Late_delivery_risk: percentage of late delivery risk
- Category Id: product category ID
- Category: product category
- Customer City: Customer purchase city
- Customer Country: Customer purchase country
- Customer Email: Customer purchase Email
- Customer Fname: Customer First name.
- Customer ID: Customer order ID
- Customer Lname: Customer's last name
- Customer Segment: Types of Customer
- Customer State: Customer order state
- Customer Street: Customer address
- Customer Zipcode: Customer area code.
- Market: top 10 country Market
- Order City: Customer purchase city
- Order Country: Customer purchase country

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- Order Customer ID: Customer
- order date (DateOrders): Customer order date
- Order Item Product Price: product price
- Order Item Profit Ratio: profit ratio
- Order Item Quantity: No of orders placed
- Sales: total no of sales
- Order Item Total: total price of the order placed
- Order Profit Per: product
- Order Region: order placed region
- Order State: order placed State
- Order Status: order delivery status
- Order Zipcode: customer area code
- Product Card ID: product number
- Product Category Id: a product whose category belongs to
- Product: what product
- Product Image: image of the product
- Product Price: Price of the product.

Data Preparation

Data Load Editor:

1. Go to the 'Prepare' tab and open the Data Load Editor.

2. Modify the default Qlik script to handle duplicates and null values as per the requirements.

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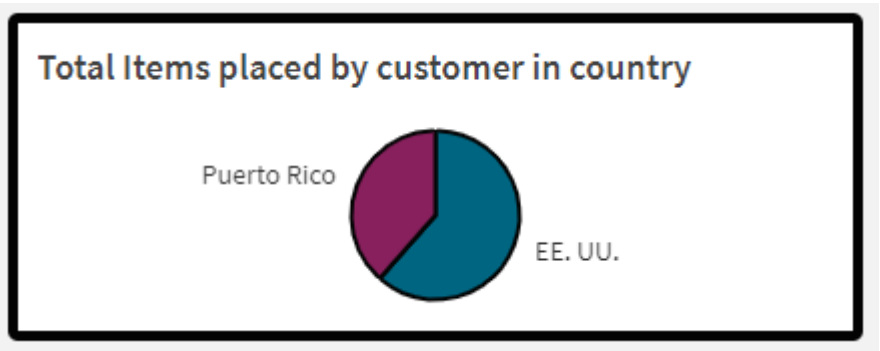
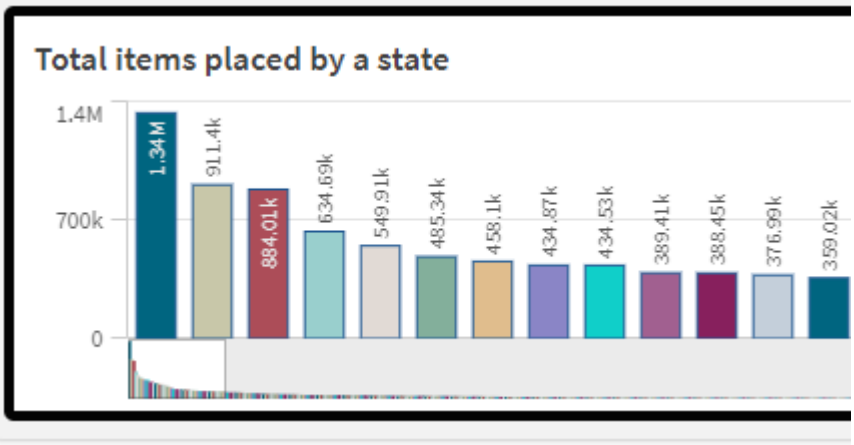
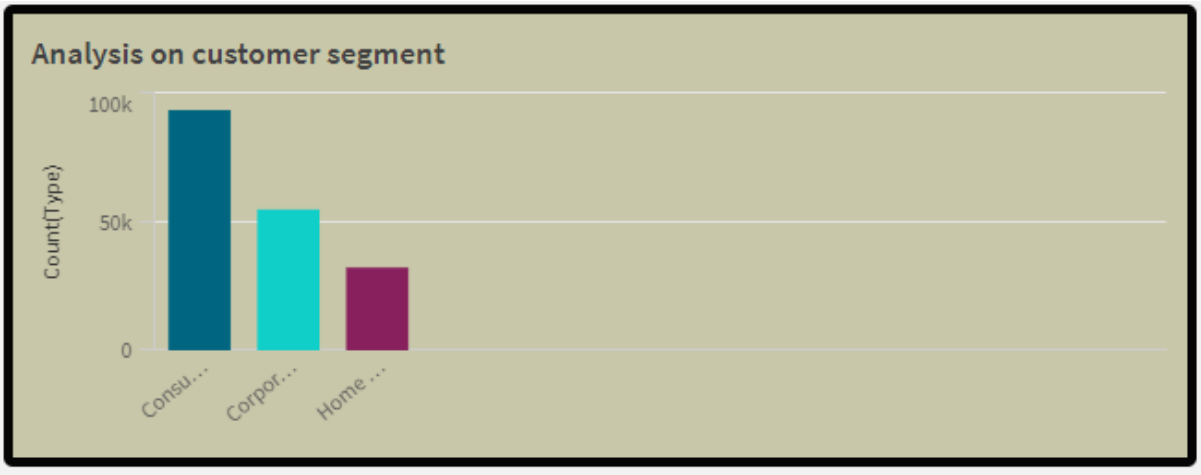
Vizualization

The number of unique visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyse the performance and efficiency of banks include bar charts, line charts, heat maps, scatter plots, pie charts,]Maps etc. These visualizations can be used to compare performance, track changes over time, show distribution, and relationships between variables, breakdown of revenue and customer demographics, workload, resource allocation and location of banks.

Few sample visualisations:







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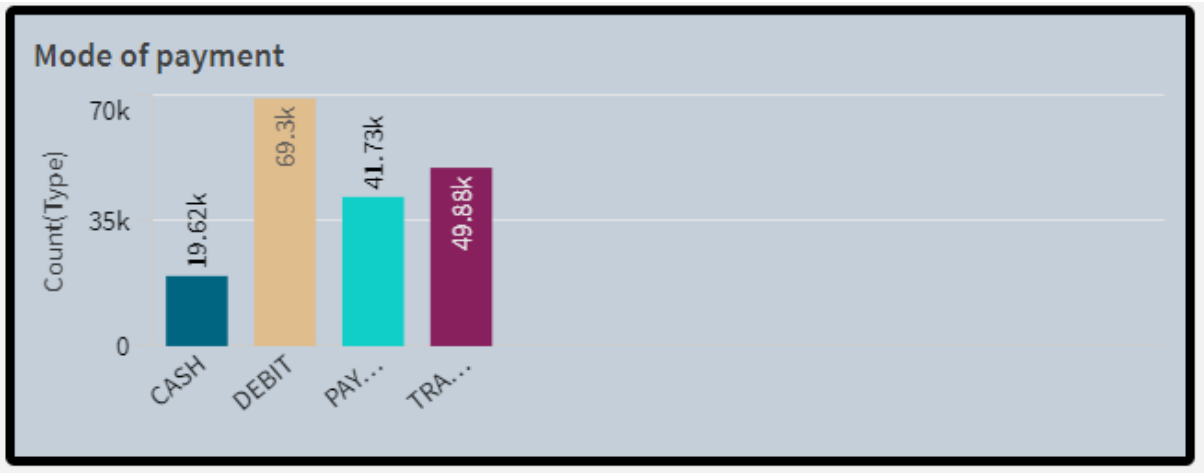

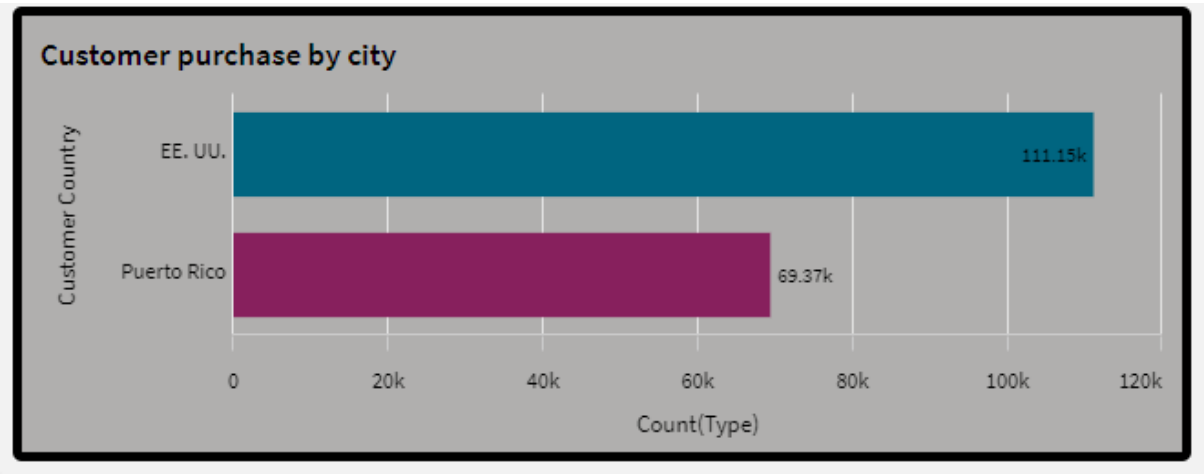

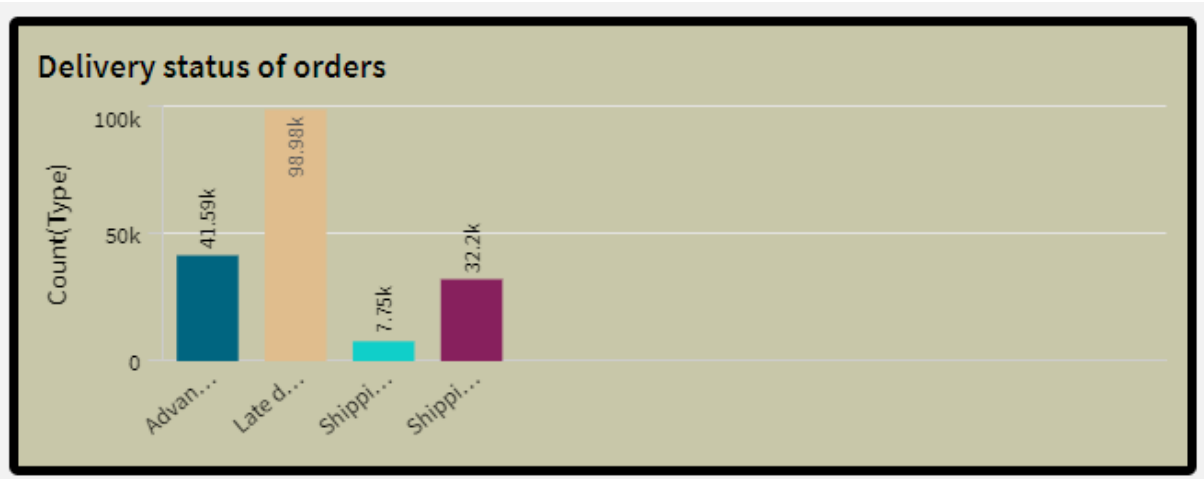

And many more visualisations.

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Dashboard and Storytelling

Dashboard Creation

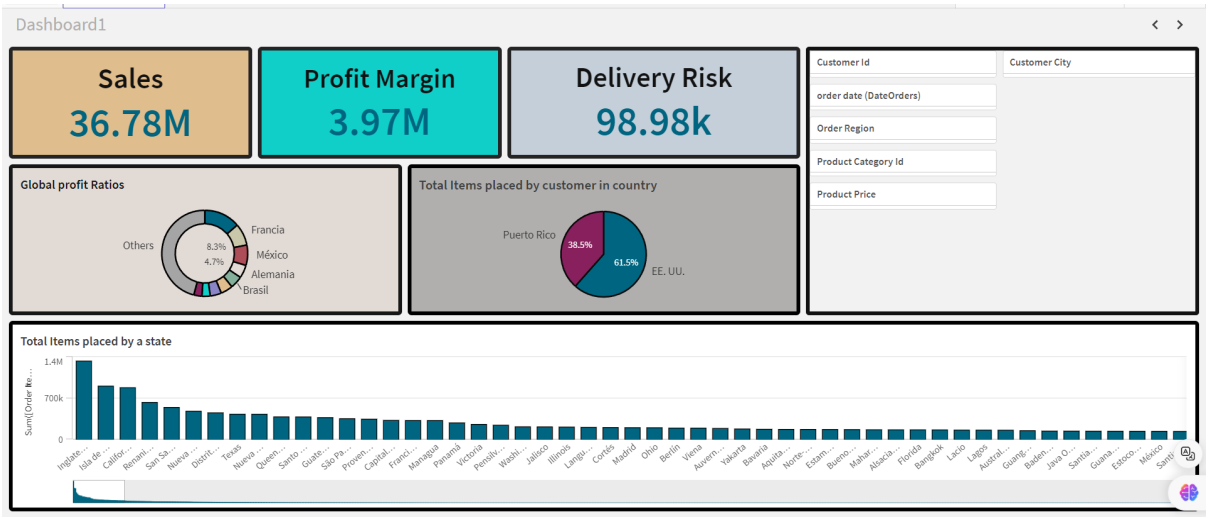
Design Dashboards:

1. Create two dashboards, aligning the visualizations and key performance indicators effectively.

Storytelling

Create a Story:

A data story is a way of presenting data and analysis in a narrative format, with the goal of making the information more engaging and easier to understand. A data story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis in a logical and systematic way, and a conclusion that summarizes the key findings and highlights their implications. Data stories can be told using a variety of mediums, such as reports, presentations, interactive visualizations, and videos.



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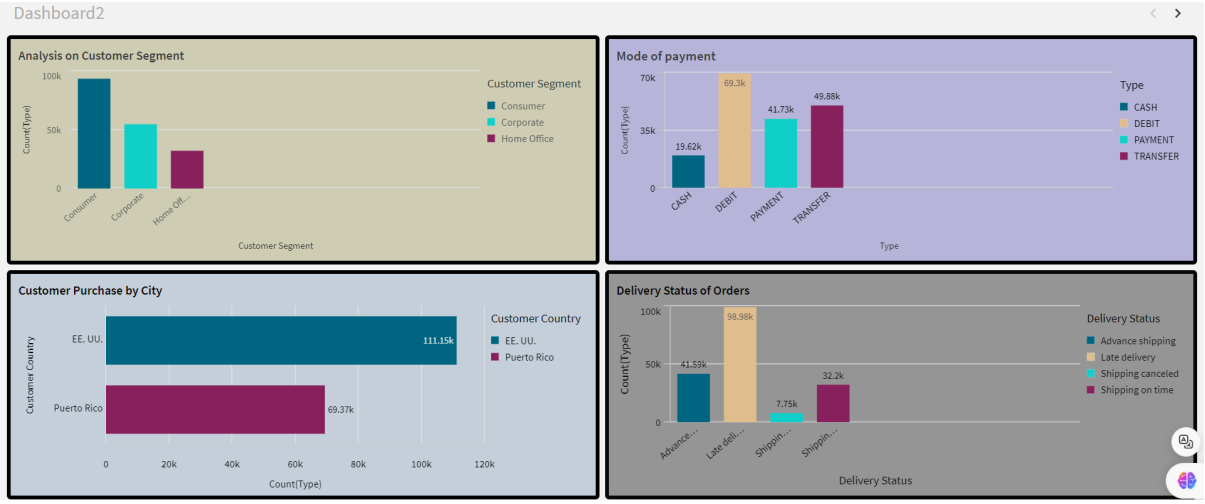

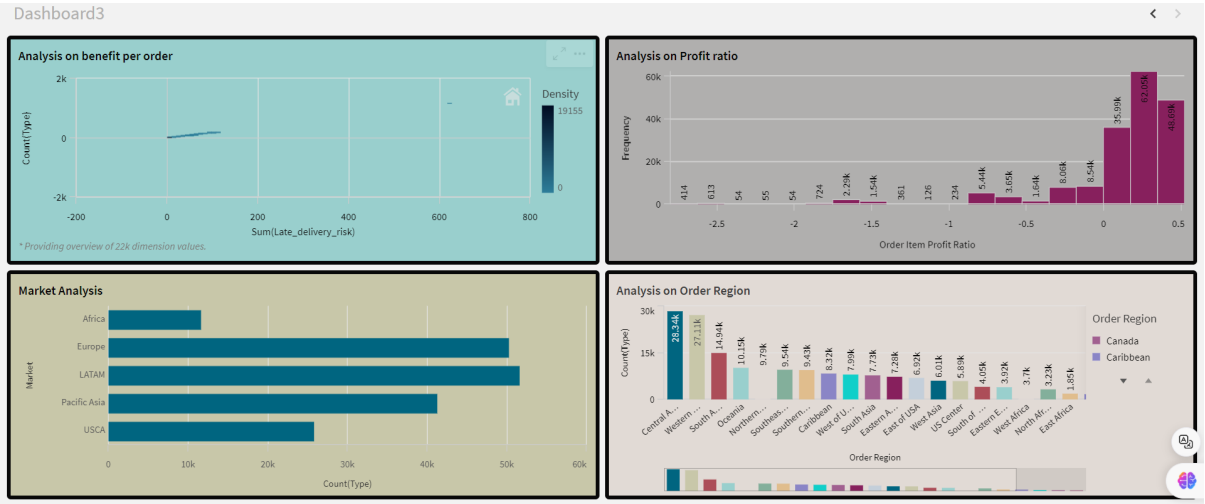

Conclusion

This report outlines the process of setting up Qlik Sense Desktop, preparing the data, creating visualizations, and compiling them into a cohesive story. The provided script and steps ensure a comprehensive approach to analyzing and presenting data effectively using Qlik Sense. The project analysis highlights the importance of data quality, performance measurement, and geographical analysis in deriving business insights and making informed decisions. The scope of the project demonstrates the potential of Qlik Sense in transforming raw data into valuable insights that can drive operational improvements and strategic planning.

Github:https://github.com/Manveesh5/Qlik-Business-Analyst-VI

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