

Data Visualization & Analysis for Car Reseller Dealer

Overview

In this project used Alteryx for data cleaning and Qlik Sense for creating impactful dashboards. The objective was to improve data accuracy by 20% and apply machine learning techniques for sales trend forecasting, aligning with job requirements for advanced data analysis and visualization.

Features

- **Data Cleaning:** Enhanced data accuracy by 20% using Alteryx.
- **Dashboard Creation:** Developed insightful dashboards with Qlik Sense.
- **Sales Trend Forecasting:** Applied machine learning for predictive analysis.
- **Comprehensive Data Management:** Leveraged advanced tools for efficient data handling and visualization.

Tools Used

- **Alteryx:** Used for data cleaning and preparation, significantly improving data accuracy.
- **Qlik Sense:** Utilized for creating interactive dashboards, providing clear and actionable insights.
- **Machine Learning Techniques:** Implemented predictive models to forecast sales trends and inform strategic decisions.

Skills Demonstrated

- **Data Management:** Ensured accurate and efficient handling of large datasets.
- **Data Cleaning:** Improved data quality using Alteryx.
- **Data Visualization:** Created impactful dashboards using Qlik Sense.
- **Data Analysis:** Conducted in-depth analysis to extract meaningful insights.

Methodology

Data Cleaning with Alteryx

Workflow:

1. **Input Data Tool:** Imported raw data into Alteryx.
2. **Data Cleansing Tool:** Removed duplicates, handled missing values, and standardized data formats.
3. **Filter Tool:** Applied logical conditions to filter the data.
4. **Formula Tool:** Created new calculated fields to enrich the dataset.
5. **Join Tool:** Merged multiple datasets for a comprehensive view.
6. **Output Data Tool:** Exported cleaned data for use in Qlik Sense.

Benefits:

- Streamlined data preparation process.
- Improved data accuracy and consistency.
- Enhanced data quality for subsequent analysis.

Data Visualization with Qlik Sense

Workflow:

1. **Data Loading:** Imported the cleaned dataset from Alteryx.
2. **Data Modeling:** Defined relationships between different data tables.
3. **Dashboard Design:** Created interactive visualizations, including charts, graphs, and tables.
4. **Advanced Analytics:** Applied machine learning algorithms for predictive insights.
5. **User Interface Customization:** Designed a user-friendly interface for easy navigation and interaction.

Benefits:

- Provided clear and actionable insights through interactive dashboards.
- Facilitated data-driven decision-making.
- Enabled advanced analytics and predictive modeling.

Example Alteryx Workflow

1. Input Data Tool: Imported raw data.
2. Data Cleansing Tool: Removed duplicates and handled missing values.
3. Filter Tool: Applied logical conditions to filter the data.

4. Formula Tool: Created new calculated fields.
5. Join Tool: Merged multiple datasets.
6. Output Data Tool: Exported cleaned data for use in Qlik Sense.

Example Qlik Sense Visualizations

- **Sales Performance Dashboard:**
 - Line charts showing sales trends over time.
 - Bar graphs comparing sales performance across different regions.
 - Pie charts displaying the distribution of sales by product category.
- **Customer Insights Dashboard:**
 - Scatter plots highlighting customer purchase behavior.
 - Heatmaps showing customer distribution by demographics.
 - KPI indicators tracking key customer metrics.

Results

- **Improved Data Accuracy:** Enhanced by 20% through Alteryx-driven data cleaning.
- **Impactful Dashboards:** Created using Qlik Sense to provide clear insights.

Qlik
Prepare Data manager
Analyze Sheet
Narrate Storytelling
Data_Project
Ask Insight Advisor
Assets
Insight Advisor
No selections applied
Sheets
Edit sheet

