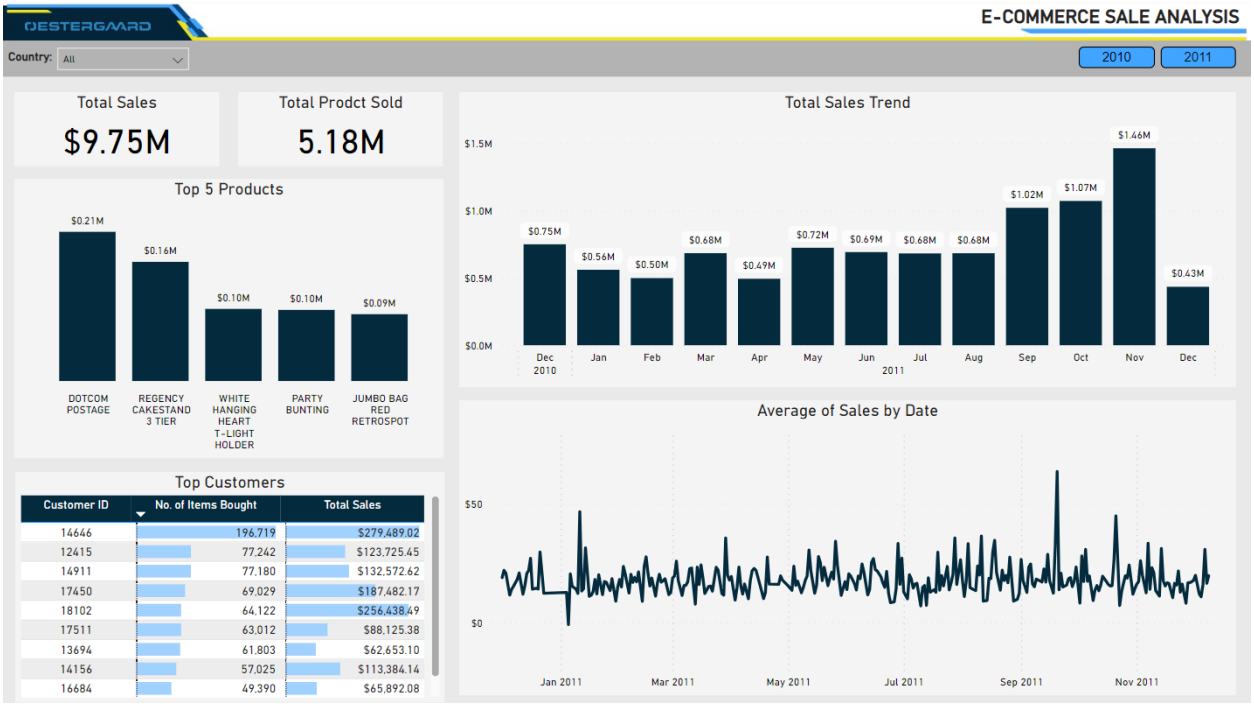
Ecommerce Sales Analysis and Visualization with dbt, DuckDB, and Power BI

Power BI Report:



Conclusion:

Based on the project outcome, the three key components - dbt, DuckDB, and Power BI - played pivotal roles in our overall implementation, each contributing its unique strengths to our project's success.

dbt (Data Build Tool): dbt served as the backbone of our project, offering an organized and streamlined approach to data preparation and modeling. It facilitated agile data transformation, ensuring that our dataset evolved with changing project requirements. The SQL-based interface simplified analytical queries and promoted consistency and reproducibility in analysis. dbt also encouraged collaboration among team members and provided an efficient way to document the data transformation process. Overall, dbt's role in this project emphasized its immense value in modern data analytics and warehousing projects.

DuckDB (Data Storage and Processing): DuckDB served as the foundation for data storage and processing, efficiently managing the large Ecommerce dataset. Its columnar storage optimized data access and query performance, complementing dbt's transformation capabilities. DuckDB's analytical capabilities allowed for complex operations on the data, and its seamless integration with dbt streamlined the data transformation process. In summary, DuckDB's efficient data handling and analytical prowess were essential for enabling meaningful insights from the dataset.

Power BI (Data Visualization and Reporting): Power BI was the interface through which our project's insights were communicated effectively. It offered a user-friendly environment for creating interactive and insightful visualizations, making data storytelling accessible to a broad audience. Power BI's integration with DuckDB facilitated the import of transformed data, simplifying the process of turning analysis into engaging visuals. Ultimately, Power BI added a layer of accessibility and engagement, allowing stakeholders to interact with and understand our project's findings easily.

Overall, dbt, DuckDB, and Power BI formed a cohesive and efficient data analytics workflow, highlighting the power of modern data tools in transforming raw data into actionable insights and compelling visual narratives. This combination of technologies showcased the synergy between data preparation, storage, analysis, and visualization in achieving our project's objectives.