Proposed solution

AI powered web application that improvises supply chain management analyzing various aspects of past data like details about shipment delivery, package weight, vendor, etc.

We will allow the user to manage its inventory/warehouse through our prediction of seasonal demands.

We will help the user to predict the shipment mode to be used so that he can arrange them in advance.

Not only users it will also help vendors to obtain maximum profit

Sometimes deliveries are late and sometimes they are

Tech stack used for data preprocessing, cleaning and visualization:

Data Cleaning and Processing:

The following Python Libraries were used:

- Pandas
- Numpy

Data Visualization:

The following Python Libraries were used:
- Matplot.lib
- Seaborn
- Plotly

The following software was used:
- Tableau

Insights of data:

Data set contains details about drug shipment throughout the world.

- Scheduled delivery dates
- Date it was delivered
- Manufacturers details
- Retailers details
- Country where it was delivered
- Unit of measure (quantity)
- Cost of each pack

Procedure followed for data cleaning & preprocessing.

- ● Data cleaning

1. Removed duplicate and irrelevant observations

Removed unwanted observations from your dataset, including duplicate observations or irrelevant observations. Duplicated observations happened most often during data collection. When combining data sets from multiple places, scrape data, or receive data from clients or multiple departments, there were opportunities to create duplicate data.

2.Fixed structural errors

Structural errors are when you measure or transfer data and notice strange naming conventions, typos, or incorrect capitalization. These inconsistencies can cause mislabeled categories or classes. For example, you may find "N/A" and "Not Applicable" both appear, but they should be analyzed as the same category.

3.Filtered unwanted outliers

In this step we determined the validity of data. If an outlier proves to be irrelevant for analysis or is a mistake, consider removing it.
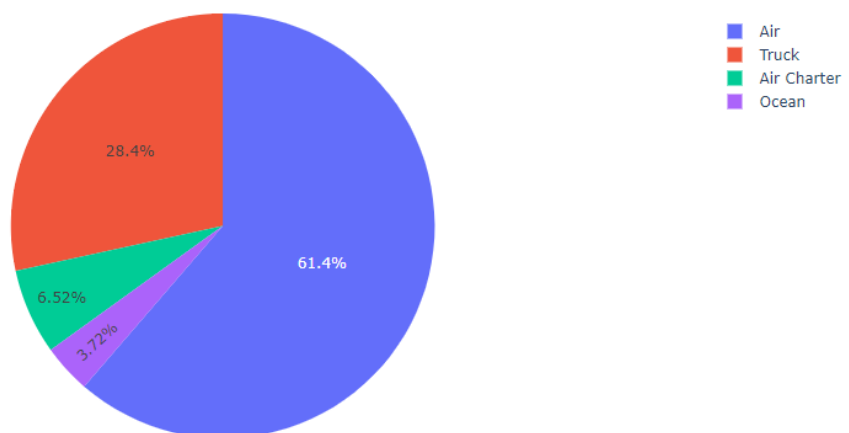
4.Handled missing data

We filled in missing values based on other observations. Like in some columns the number of missing values was very less so we filled them with the mean value of the column.
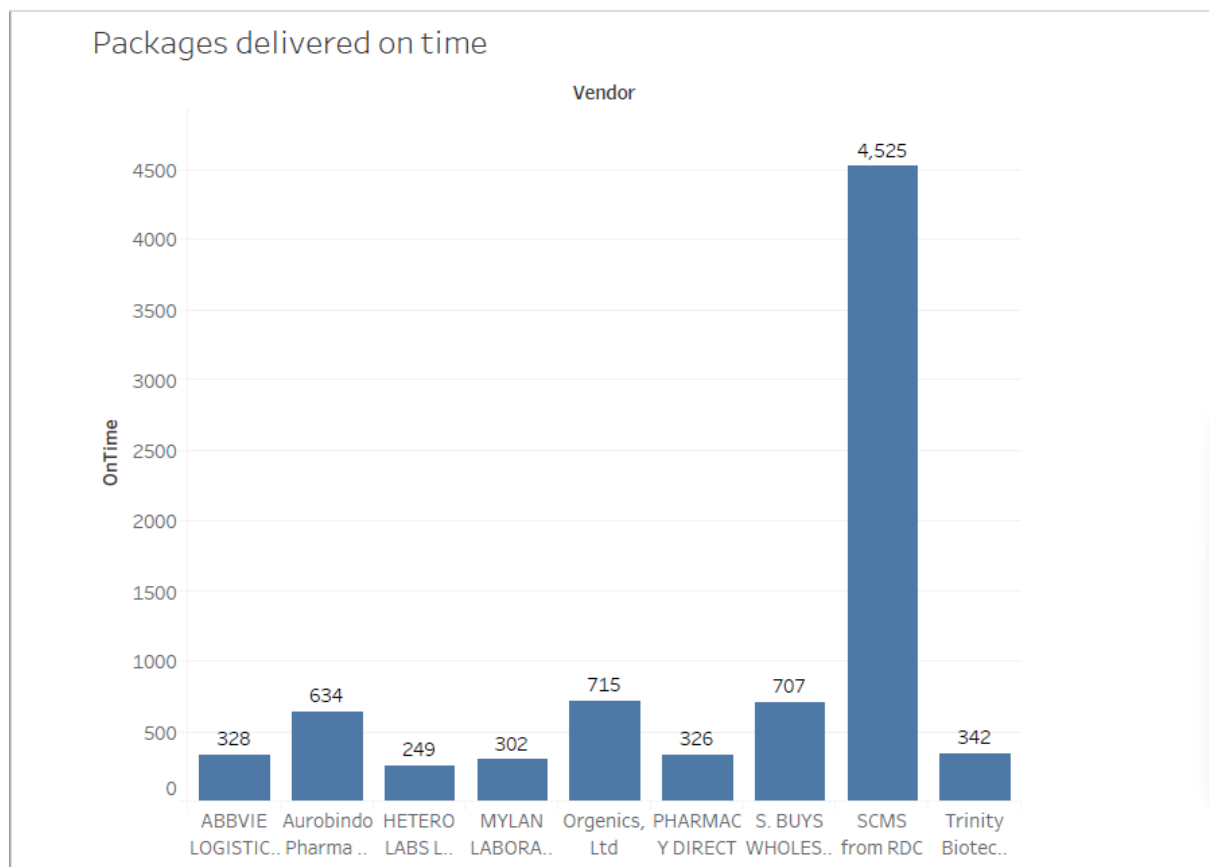
Data Visualization snippets with explanation:

Shipment Mode:

Shipment Mode

This pie chart shows the modes which were used for the shipments.

The graph shows the vendors that delivered the shipments on time.

Links:

Google Colab: [Data Cleaning And Visualization](#)

GitHub: [Group 8: Zero Two Repository](#)