PROJECT REPORT ON ANALYSIS OF WISH E-COMMERCE DATA (2020 AND 2021)

About the Wish platform:

- Wish is one of the largest e-commerce platforms that lets users sell and buy all sorts of products.
- Founded in San Francisco in 2010 and is now active in more than 60 countries.
- They are selling a huge variety of affordable products to consumers all over the world.

About the data set:

- For our project, we will be using E-commerce product sold historical data for 2020 and 2021. The uncleaned dataset is obtained from Kaggle.
- The purpose of our project is to determine the top-selling product category, size, and color.
- Product attributes like price, discount, size, color, and rating are to be used for analysis.
- Niche and Mainstream files contain over 315 product category files. Furthermore, some files are related to product ratings and performances.

Objective:

- The goal of this project is to create a dashboard for Wish E-commerce executives so that they can have an overview/analysis/report on their business, with a focus on sales, inventory, and product features such as size, color, and rating for the year 2020 and 2021.

Step 1: Data Wrangling

- **Merged the dataset:** The 315 files were merged to get the master dataset.
- **Missing value check:** Rows and columns with very little information were removed and some missing values were imputed using different statistical methods.
- **Accuracy check:** An outlier check was performed to remove irrelevant information.

Step 2: Data Preparation for Visualization

- **Unwanted Columns**
  Some columns were not important for our analysis, so we removed them e.g., product URL and product image, etc.
- **Added New Measures**
  New columns were added to our dataset that we used in the infographics such as discount price, discount flag, and discount percentage.
- **Fuzzy Word Match**
  We used the fuzzy word matching method on product color and product size to reduce the color to 14 and size to 10 to get unique values.

- **Rearranging Columns**
  In the next step, we arranged variables according to characteristics, we place those columns first associated with the product, then merchant and prices, and so on.

Executive summary:
(https://public.tableau.com/app/profile/ankit.sahu/viz/CPSC_project_Wish/KPI-Presence?publish=yes)
An interactive dashboard with three layers of information to help all the executives at different levels to consume the dashboard for the decision making.

- **Overview**: Defines the overview of the wish business in terms of how their business is spread across the globe, how their merchants are spread and how the product volume is purchased globally.

- **Analytics**: Enables the users to slice and dice various KPIs like revenue, discount, ratings, and product attribute like size, color, and rating.

- **Report**: A detailed report or table with all the relevant information which we have analyzed to assess and create a business intelligence dashboard to cater to the needs of numbers and statistics for decision making.
  This dashboard will help users to back their decision using the numbers and KPIs from the dashboard by using different filters to slice and dice these business metrics and KPIs.
  It can be shared with different users by proving the tableau server URL and can be opened anywhere if there is an internet connection available.
  As the data is in extract mode, the dashboard doesn't need to connect to the data source and can be worked upon offline as well.

Recommendation for Wish:
- Highly dependent on just two countries for their revenue and inventory which is not good for the long run to sustain. Campaigns and strategies should be changed to widespread their customer base.
- Some regions don't have express shipping which may delay the delivery of products and result in low ratings and loss of customers as competitors may provide better service. To tackle this express shipping should also be provided in other countries.
- Revenue forecasting can be done to determine the targets for the future to have realistic goals and correct areas where the company is making losses.