**Data Analysis Project**

**Christmas Sales and Trend Analysis**

This is an unguided data that informs the audience about Christmas season sales and trends involving features such as customerID,age,gender,product type,product description, order online flag,quantity,unit price,total price,payment type,weather,gift wrap and return flag.

* **Data:** The data was provided by Onyx DataDNA Dataset Challenge Platform for data analysts to try deriving insights and also provide powerful visualisation to back their findings and insights derived.
* **Method/Analysis:** The link of the data was provided where the zip files can be located,then the data was previewed in Microsoft Excel,cleaned using Python Analysis Libraries before proper exploratory data analysis was done using SQL queries and Python,the visualisation was provided in a PowerBi worksheet.
* **Findings:**

These findings will help the owners of the supermarts to make informed decisions and also praise locations that are doing so well.

1. 2023 has the highest total sales yielding 286k,followed by 2018 with 284k from total sales and then 2021 with 277k.
2. Male has a count of 3.4k in the Christmas sales followed by Females at 3.3k and others also at 3.3k.
3. The ages that have been involved heavily in the Christmas sales are ages 21,57,18,38,44 and 22.
4. There were 5.42k online orders and 4.58k offline orders during the sales.
5. CustomerID 343 has the most total price of 499.98,with customerID 115 with 499.87 and CustomerID 184 with 499.46
6. The top 5 locations with the most sales entries are City\_13 having 550 entries, City\_12 with 517,City\_1 with 516,City\_18 with 516 and City\_14 with 515 entries.
7. The top 5 locations with the most money made during Christmas sales, City\_13 made 90.9k,City\_1 made 87.7k,City\_15 made 87.3k,City\_2 made 86.7k and City\_19 made 86.5k.
8. The most used payment medium is Cash,followed by online payment and credit cards and lastly debit cards.
9. Most people prefer to shop on Rainy days,followed by Snowy then Sunny.
10. Electronics,Toys and Decorations are the top most bought products during Christmas sales.

* **Conclusion:**

The results of these analysis and their visualisation can all be found in the analysis notebook and visualisation worksheet which are all available in the project folder and I am looking forward to exploring the data more with better features.

* **Appendices:**

– Microsoft Excel for data exploration

– Python/ SQL for my analysis.

– Microsoft PowerBi for data visualisation.

– Google Docs for Report Writing.