**Documentation:**

I have used a **Jupyter notebook for python** along with the libraries below.

* **NumPy**: Fundamental package for numerical computing with Python.
* **Pandas**: Data manipulation and analysis library.
* **Matplotlib / Seaborn:** Plotting libraries for creating visualizations.

Below is my code and output document details,

1. Jupyter Notebook file: **Arul\_Assignment.ipynb** (Open this file in jupyter notebook, it will show the code with executed output dashboard)
2. For your reference, I have attached short video of Dashboard in the file, **Arul\_Output\_Dashboard.mp4**
3. If not, I have exported code and output in .py and .html format as follows:

Code: **Arul\_Executable\_Code.py**

Output: **Arul\_Output\_Dashboard.html**

I have created Dashboard with below data cuts,

1. Sales data categorized by year - Since there is only one year given in the data, I have printed **Total Sales on the Year 2019.**
2. Sales data categorized by month - Calculated Month from the date column and created **Total Sales vs Month** as bar chart.
3. Sales data categorized by gender - Created **Total sales vs Gender** as pie chart.
4. Sales data categorized by city - Created **Total Sales vs City** as bar chart.
5. Sales data categorized by payment type - Created **Total sales vs Payment type** as pie chart.
6. Sales data categorized by product line, including gross income - Created **Product line vs Gross Income** as bar chart.
7. Trend analysis of sales over time - Created Trend for **Sales vs Date.**
8. Average ratings for each product line - Calculated average of ratings from ratings column and created **Product line vs Average ratings** as bar chart.