

a) Create a cluster & attach the notebook to the cluster and run all commands in the notebook & creates a Data frame from a Databricks dataset& Create a Visualizations in Databricks notebooks

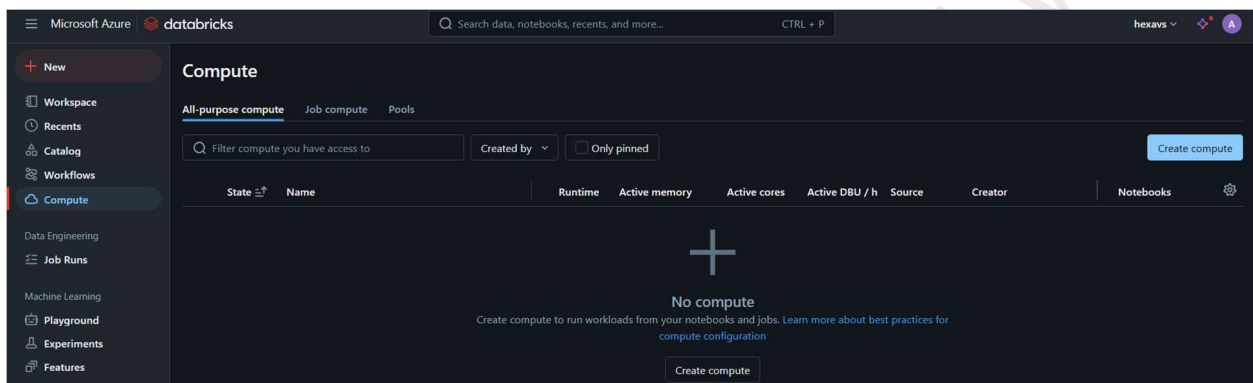
1. Procedures

2. Queries and visualizations

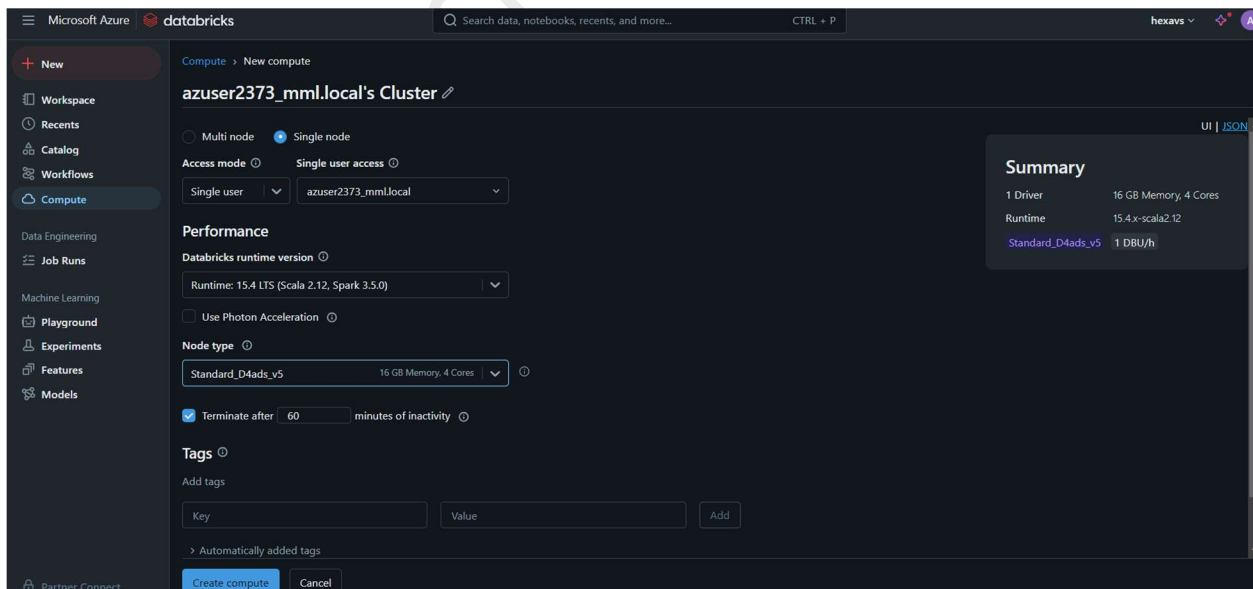
PROCEDURES

Cluster creation

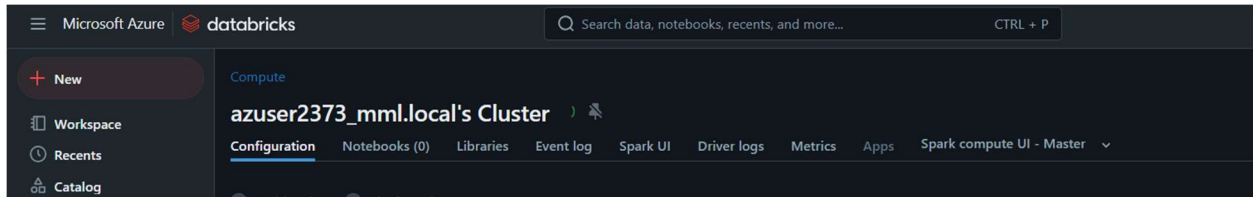
1. go to compute in azure databricks workspace and click on create compute



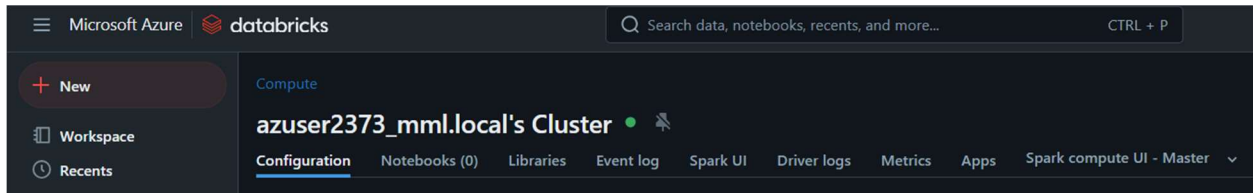
2. Give the necessary details like mode, runtime version, node type and click on create compute



3. Cluster creation started. Wait for 3-5 minutes.

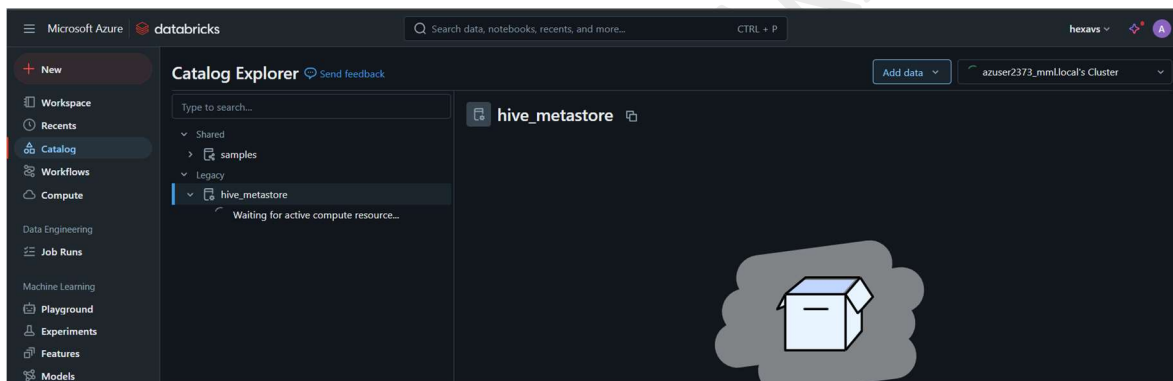


4. Cluster created successfully.

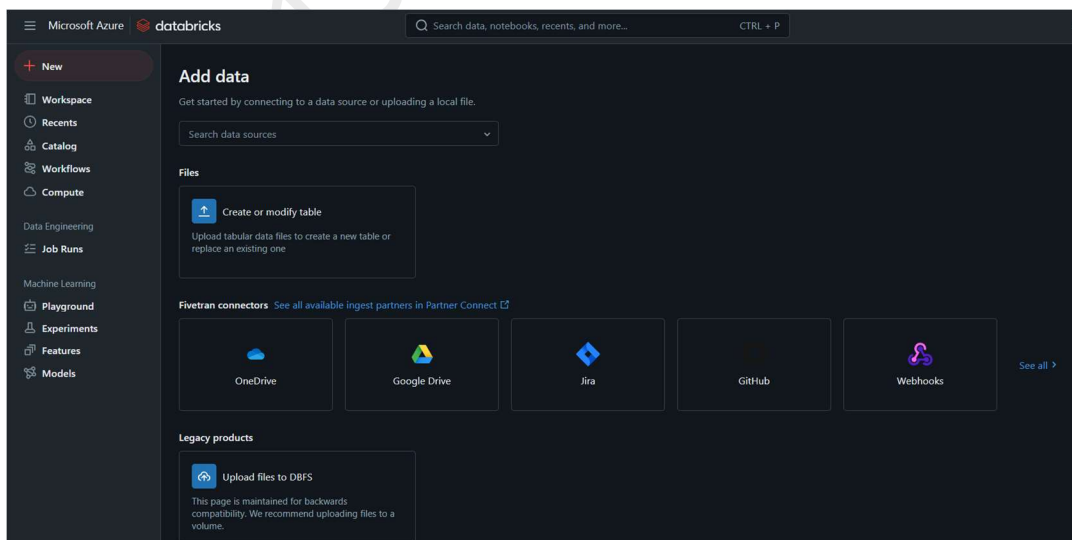


Uploading data to dbfs

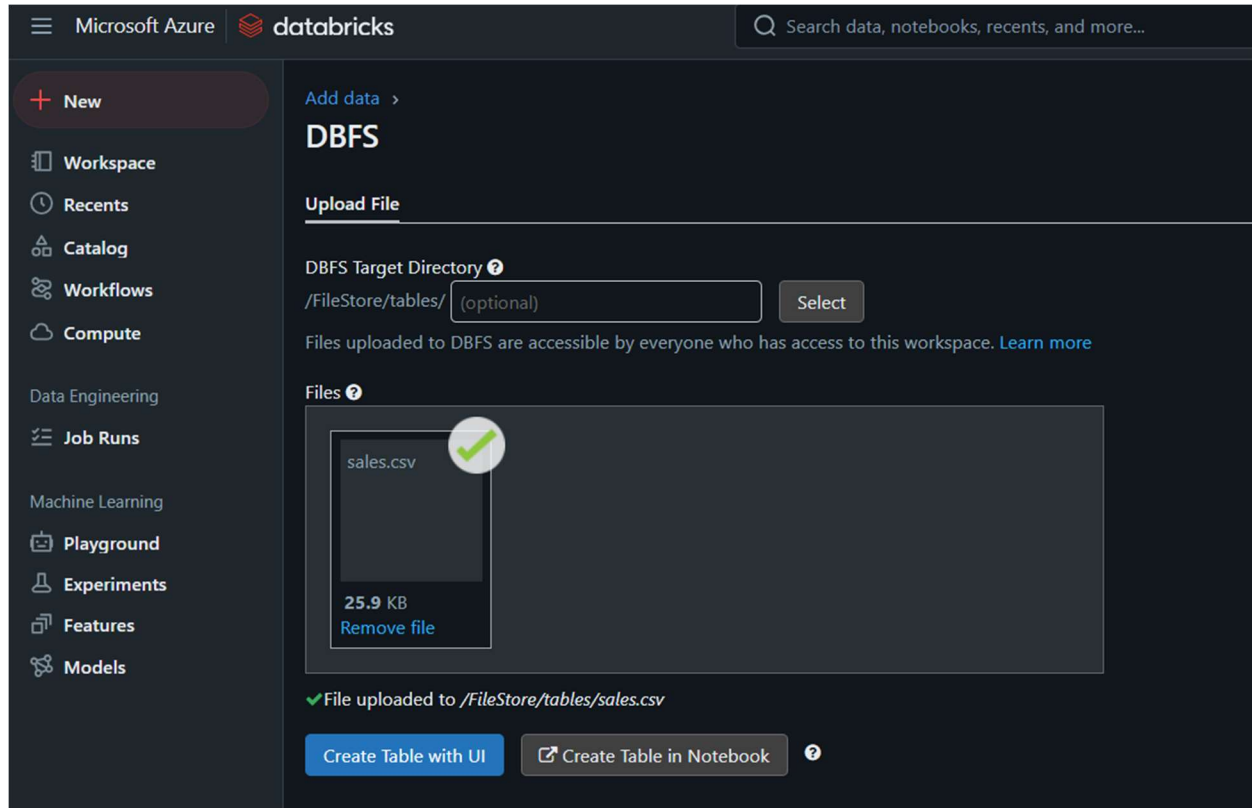
1. Go to catalog. Click on Add data.



2. click on legacy products> upload files to DBFS.



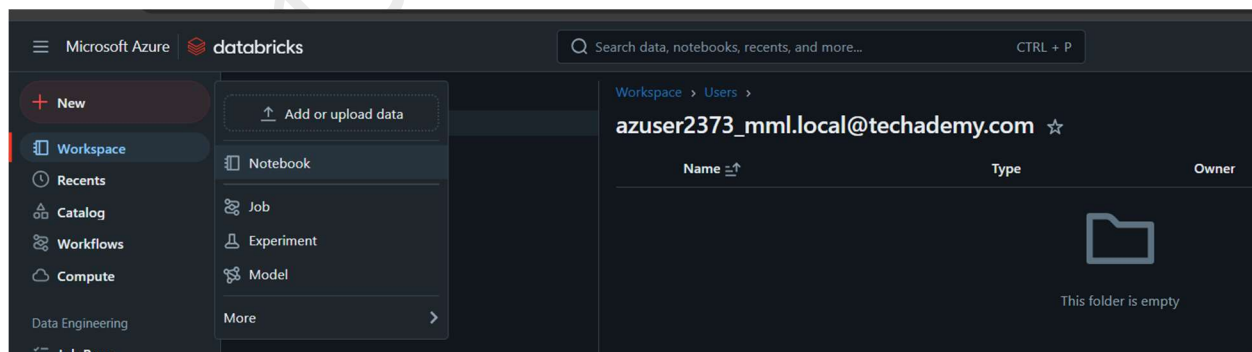
3. choose the file from local directory and click on upload.



4. File uploaded to the location “ /FileStore/tables/sales.csv“

Notebook Creation

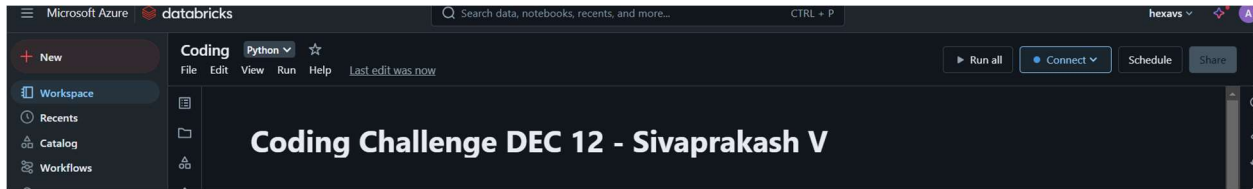
1. go to workspace. Click on notebook. Give name to notebook.



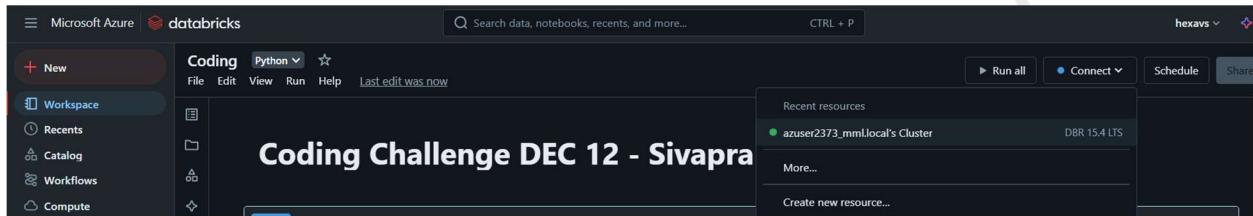
2. Notebook created successfully.

Attach cluster to notebook

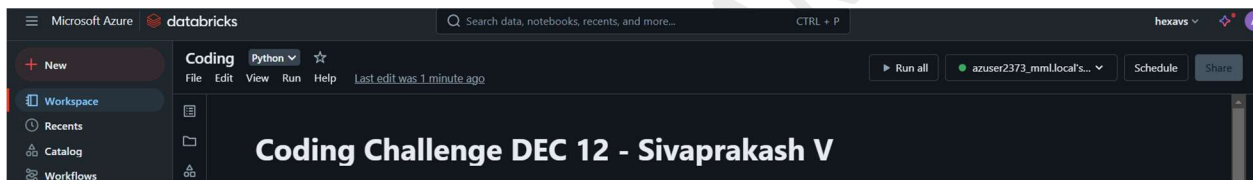
1. click on connect



2. live clusters or active clusters will appear.



3. click on that cluster. Now cluster attached with notebook.



Extraction

```

# Define the file path
file_path = "/FileStore/tables/sales.csv"
# Read the CSV file
df = spark.read.csv(file_path, header=True, inferSchema=True)

(2) Spark Jobs
df: pyspark.sql.dataframe.DataFrame = [Date: date, Day: integer ... 16 more fields]
    
```

Transformations & Visualizations

For creating visualization, click on + symbol next to table. And click on Visualization

▶ (2) Spark Jobs

▶ gender_revenue: pyspark.sql.dataframe.DataFrame = [Customer_Gender, Total_Revenue]

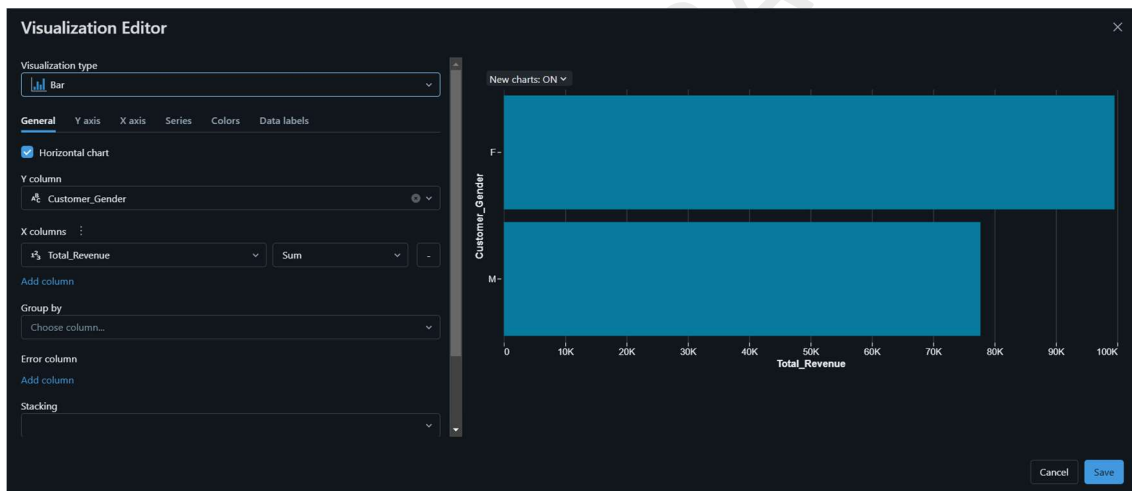
Table ▾ +

	A ^B C ^B Cus	1 ² 3 Total_Revenue
1	F	99555
2	M	77695

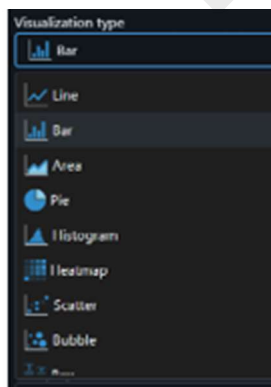
Visualization
Data Profile

We can choose the type of visualization accordingly in the visualization editor.

After creating visualization save it.

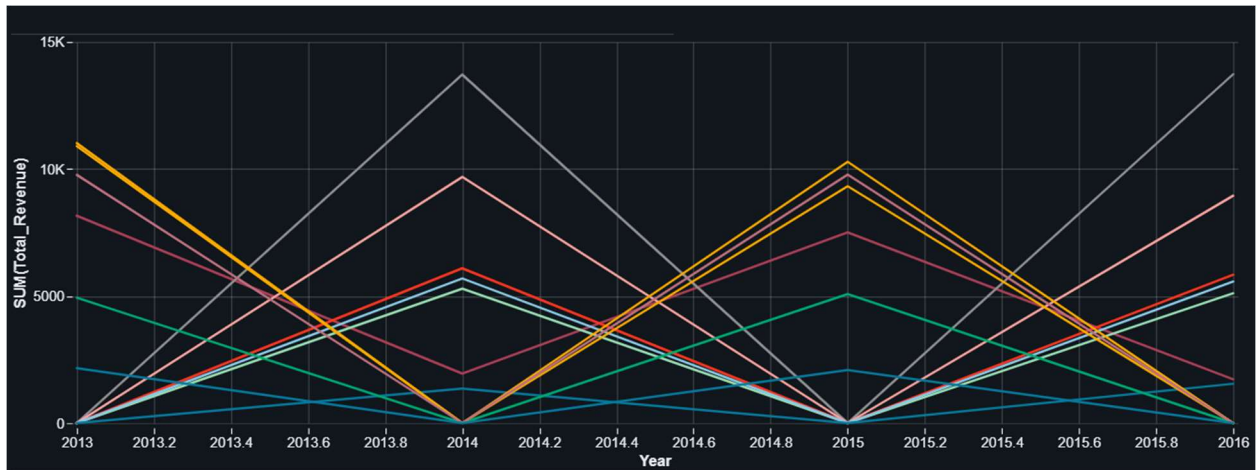


Types of visualization available

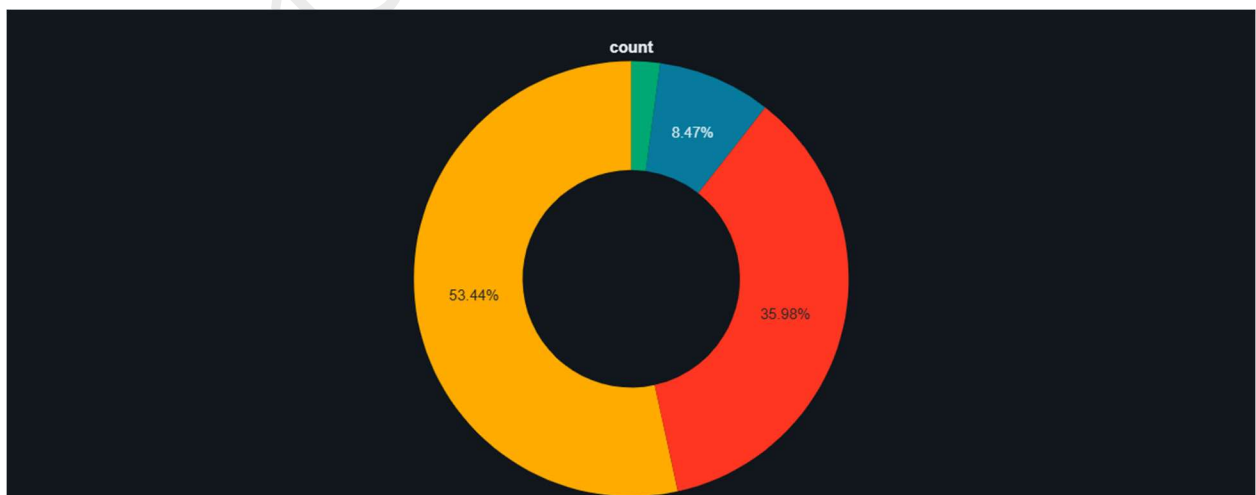


QUERIES AND VISUALIZATIONS

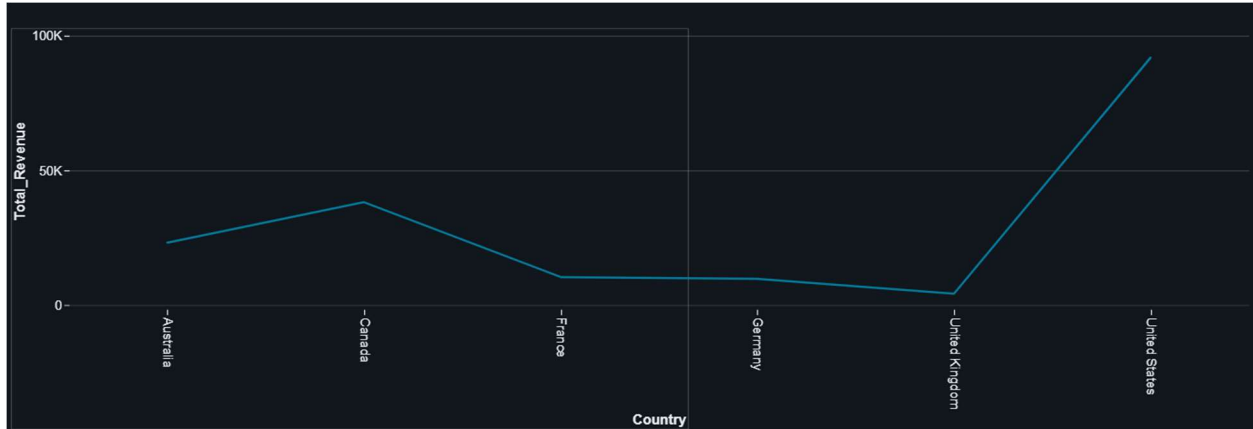
Revenue trend over time.



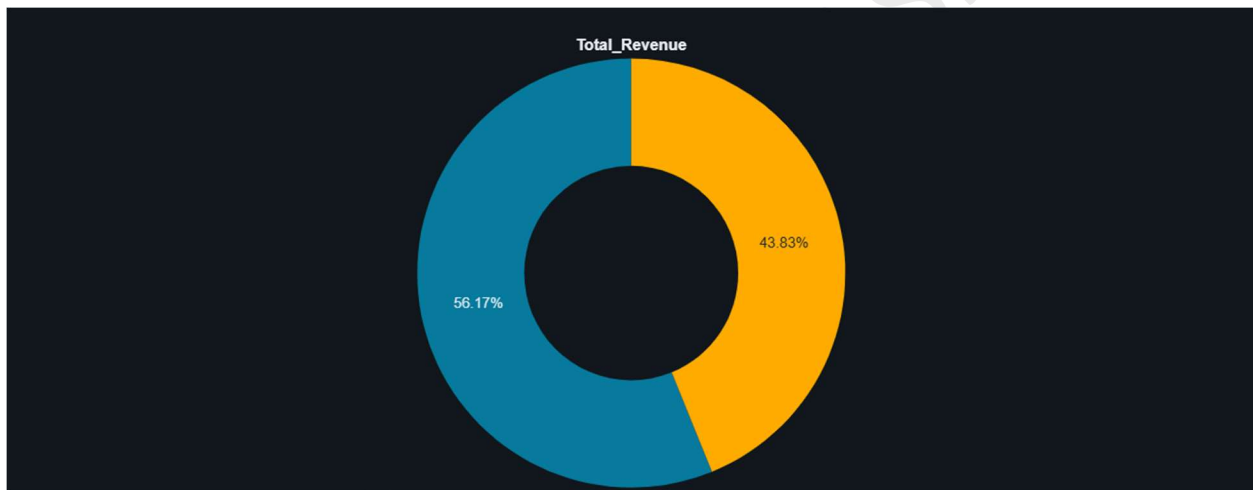
Customer Age group distribution



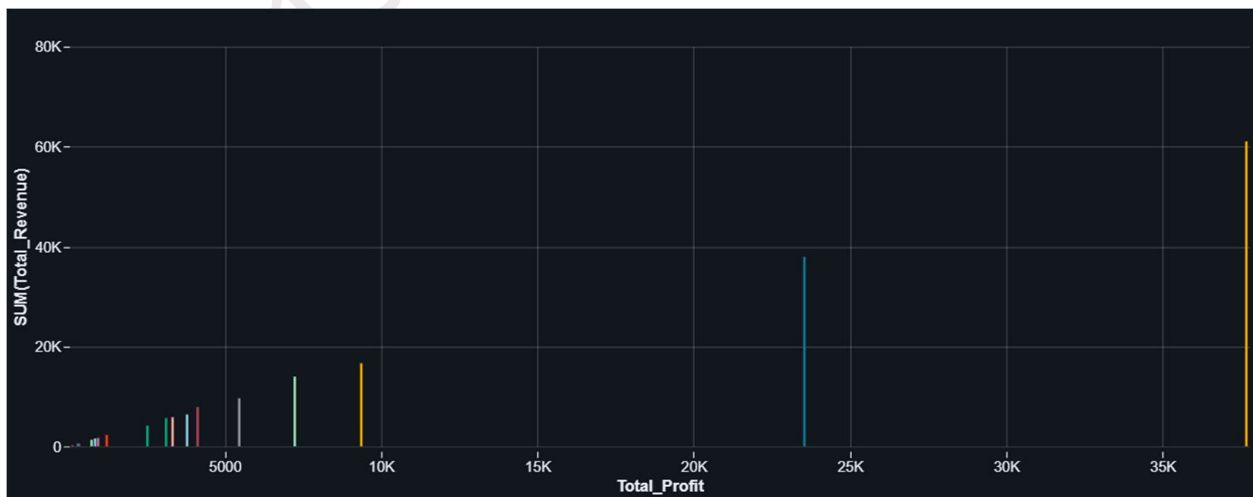
Country wise Revenue Analysis



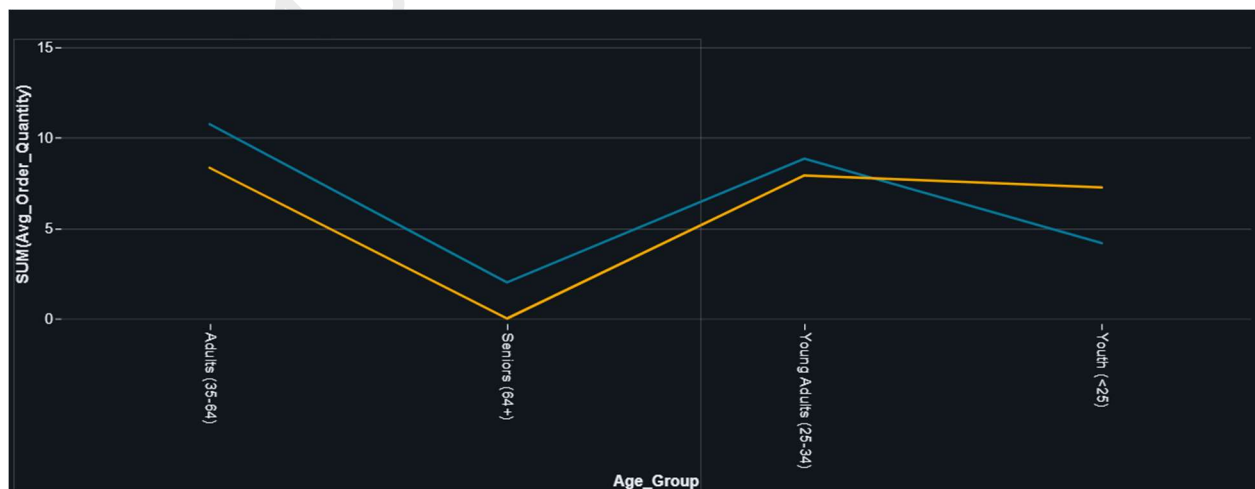
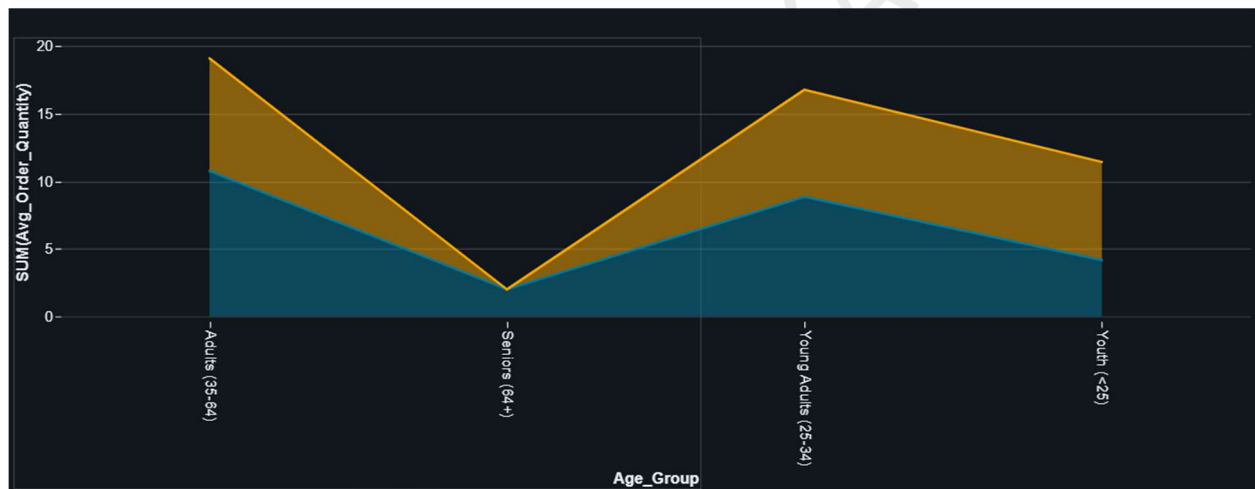
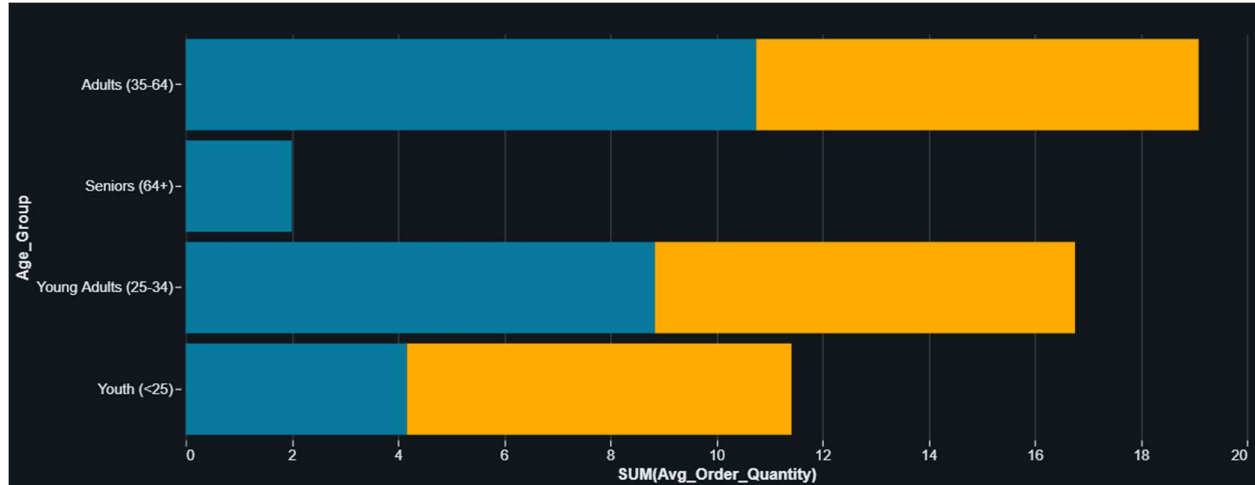
Gender Base revenue analysis

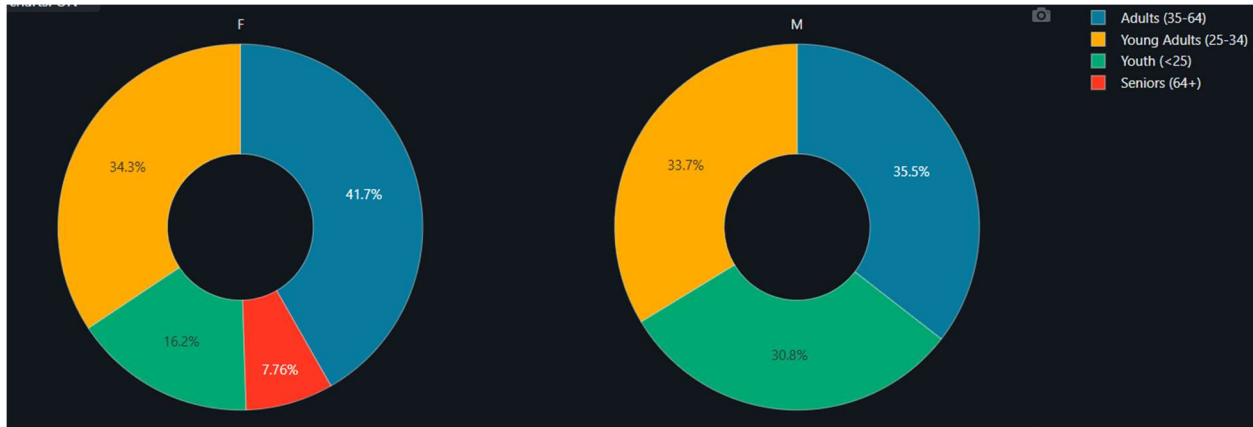


Total revenue and profit by state

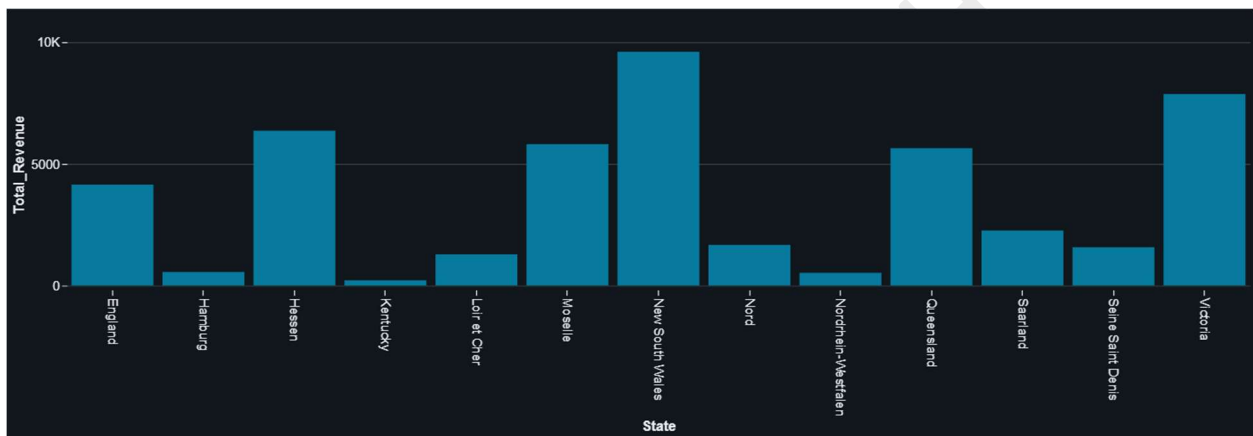


Average Order Quantity by Age Group and Gender





Low-Performing States



Season based trend in revenue

