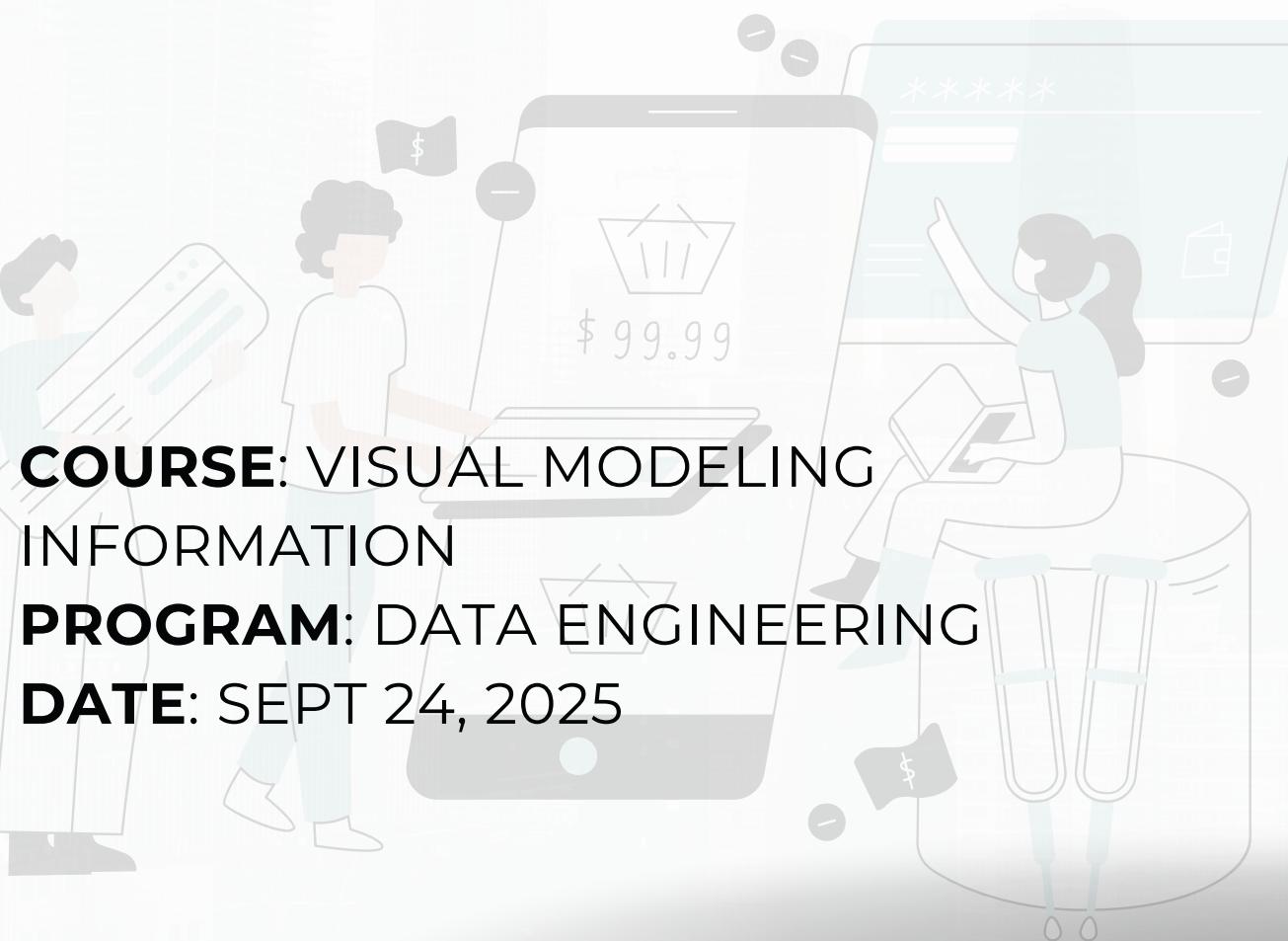


E-COMMERCE PROJECT



COURSE: VISUAL MODELING
INFORMATION

PROGRAM: DATA ENGINEERING

DATE: SEPT 24, 2025

MOISES TEAM:

GERARDO HERNANDEZ WIDMAN
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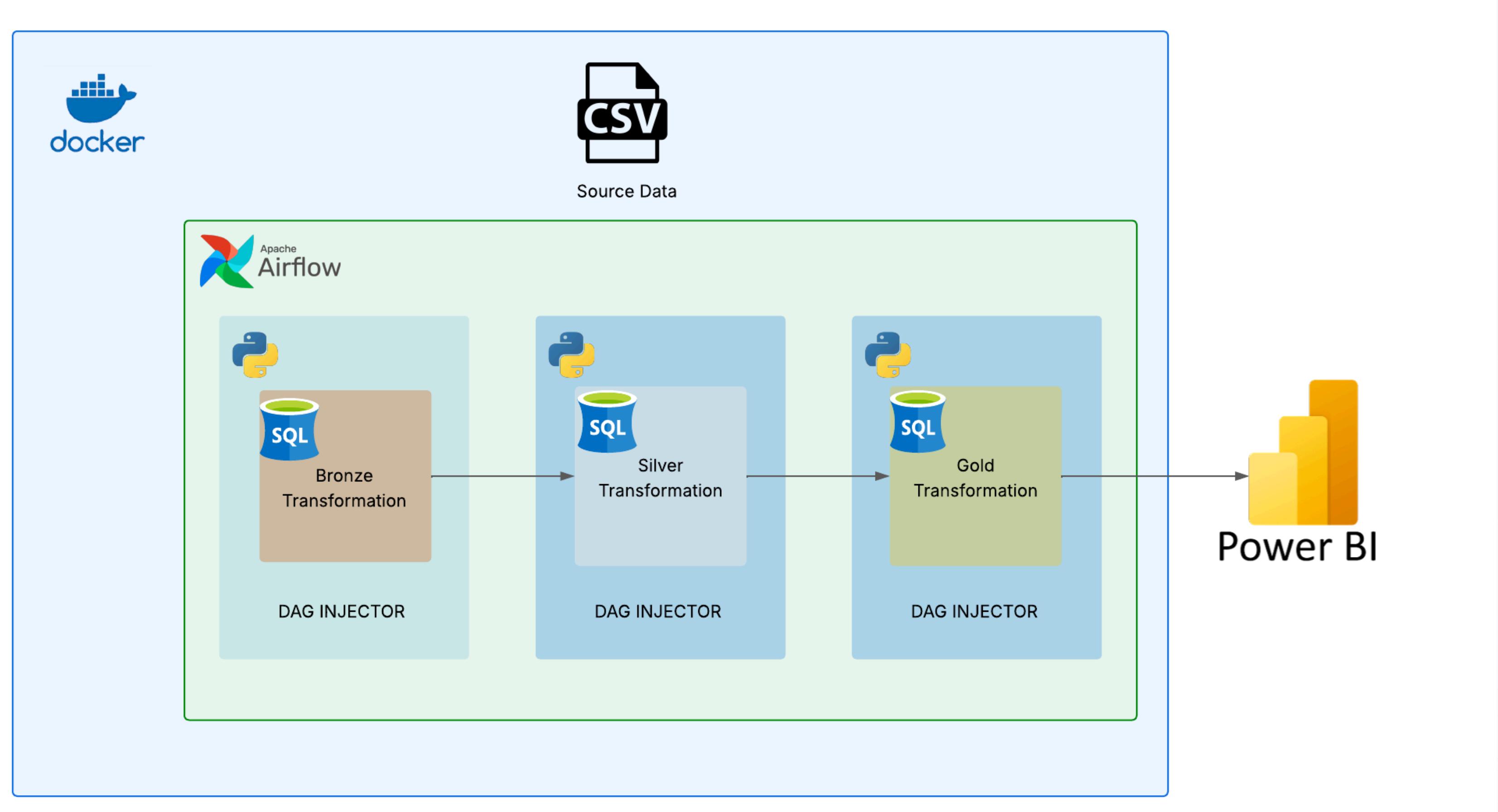
The goal of this project is to **analyze e-commerce sales** data to measure profitability, compare sales channels, and **detect key trends**.



Interactive dashboards highlight KPIs like revenue, profit margin, and channel performance to support **data-driven decisions**.



DATA PIPELINE





DB - TABLES

```
1  from pathlib import Path
2  import pandas as pd
3  from scripts.db.mssqlClient import connect_to_mssql
4  from config import get_mssql_config
5
6  BASE_DIR = Path(__file__).resolve().parent.parent
7  CSV_DIR = BASE_DIR / "data" # Carpeta que contiene todos los CSVs
8
9  > def safe_sql_name(name: str) -> str: ...
10     return f"[{name}]"
11
12  > def ingest_csv_to_mssql(server, database, username, password, csv_path): ...
13      print(f"Inserted data from {csv_path} into table {full_table_name}.")
14
15  > def ingest_all_csvs(): ...
16      )
17
18
19  if __name__ == "__main__":
20      ingest_all_csvs()
```

```
# Data Warehouse creator script for MsSQLServer.

from scripts.db.mssqlClient import connect_to_mssql
from config import get_mssql_config
from pathlib import Path

def get_base_dir():
    return Path(__file__).resolve().parent.parent

> def generate_layer_schemas(server, database, username, password): ...
    print(f"Failed to connect to target database '{database}'.")

> def main(): ...
    generate_layer_schemas(**mssql_cfg)

if __name__ == "__main__":
    main()
```

INGEST CSV TO MMSQL

SCHEMA GENERATOR



DB - TABLES

index	DATE	Months	CUSTOMER	Style	SKU	Size	PCS	RATE	GROSS_AMT
8965	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0096	J0096-KR-M	M	1	562.5	534
8966	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0096	J0096-KR-XL	XL	1	562.5	534
8970	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0201	J0201-TP-S	S	1	562.5	534
8971	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0201	J0201-TP-M	M	1	562.5	534
8972	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0201	J0201-TP-L	L	1	562.5	534
8973	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0201	J0201-TP-XL	XL	1	562.5	534
8974	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0354	J0354-KR-S	S	1	562.5	534
8975	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0354	J0354-KR-L	L	1	562.5	534
8976	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0354	J0354-KR-XXL	XXL	1	562.5	534
9030	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0096	J0096-KR-XS	XS	1	562.5	534
9031	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0096	J0096-KR-S	S	1	562.5	534
9032	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0096	J0096-KR-L	L	1	562.5	534
9033	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0096	J0096-KR-XXL	XXL	1	562.5	534
9034	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0096	J0096-KR-XXXL	XXXL	1	562.5	534
9060	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0197	J0197-TP-M	M	1	562.5	534
9061	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0197	J0197-TP-L	L	1	562.5	534
9062	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0197	J0197-TP-XL	XL	1	562.5	534
9063	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0197	J0197-TP-S	S	1	562.5	534
9064	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0197	J0197-TP-XXL	XXL	1	562.5	534
9065	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0197	J0197-TP-XS	XS	1	562.5	534
9066	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0197	J0197-TP-XXXL	XXXL	1	562.5	534
9067	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0198	J0198-TP-XXL	XXL	1	562.5	534
9068	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0198	J0198-TP-XS	XS	1	562.5	534
9069	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0198	J0198-TP-XXXL	XXXL	1	562.5	534
9070	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0198	J0198-TP-S	S	1	562.5	534
9071	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0198	J0198-TP-L	L	1	562.5	534
9072	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0198	J0198-TP-XL	XL	1	562.5	534
9073	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0198	J0198-TP-M	M	1	562.5	534
9074	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0201	J0201-TP-XXXL	XXXL	1	562.5	534
9075	2022-02-22	Feb-22	ETHNIC WEAVES FASHION LLC	J0201	J0201-TP-XXL	XXL	1	562.5	534

Silver - Amazon Sales

gold.AmazonSalesSummary

Date	TotalQty	TotalAmount
4/4/2022	2662	1764118.34
4/7/2022	2754	1819798.7
4/15/2022	3240	2049084.26
5/14/2022	2134	1536343.8
6/1/2022	2750	1870860.42
4/6/2022	2878	1773970.52
6/15/2022	2248	1570178.64
5/31/2022	2552	1806138.18
4/5/2022	2972	1901088.1
6/12/2022	2854	1910493.64
5/4/2022	3622	2418728.34
6/29/2022	1254	823061.52
5/12/2022	1992	1386891.86
6/14/2022	2632	1798468.02
5/19/2022	2182	1556052.5
5/23/2022	2148	1511861.12
4/10/2022	3238	2150468.06
6/20/2022	2208	1513529.82
4/16/2022	3076	2020112.46
4/2/2022	2816	1826203.06
5/10/2022	2110	1447233.76
4/3/2022	3088	2023526.76
6/17/2022	2100	1494698.2
3/31/2022	312	203367.7

Display Options

- localhost:14...
- bronze...
- bronze...
- bronze...
- bronze.l...
- bronze....
- bronze....
- gold.A...
- gold.Cl...
- gold.Ex...
- gold.Int...
- gold.M...
- gold.PL...
- gold.Sal...
- silver.A...
- silver.Cl...
- silver.Ex...
- silver.In...
- silver.M...

Gold - Amazon Sales Summary

BENCHMARKING

- Apache Airflow: Orchestrates data pipelines reliably and transparently.



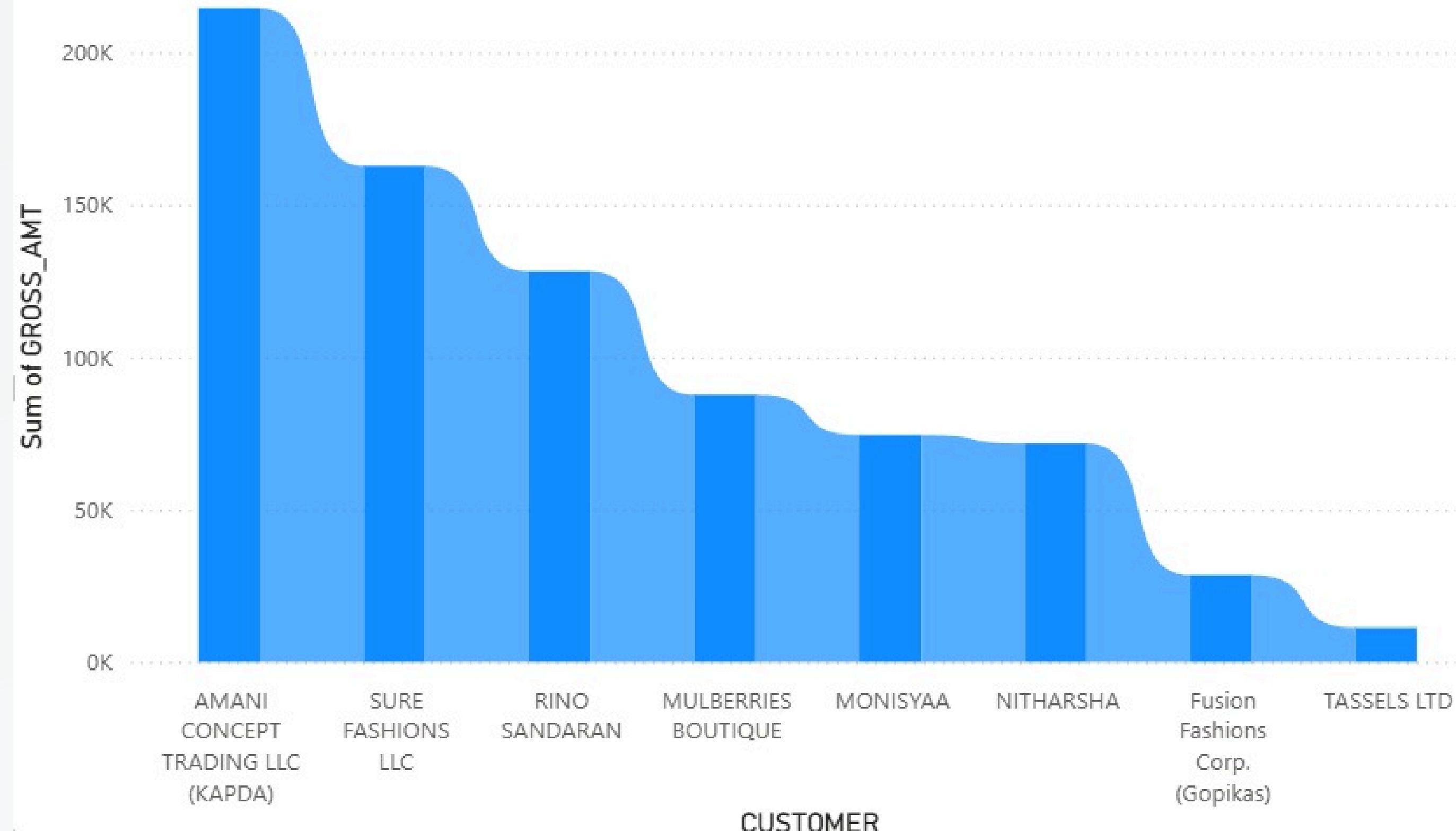
- Python: Handles data processing, scripting, and integrations efficiently.

- Microsoft SQL Server: Manages structured enterprise data with strong consistency.



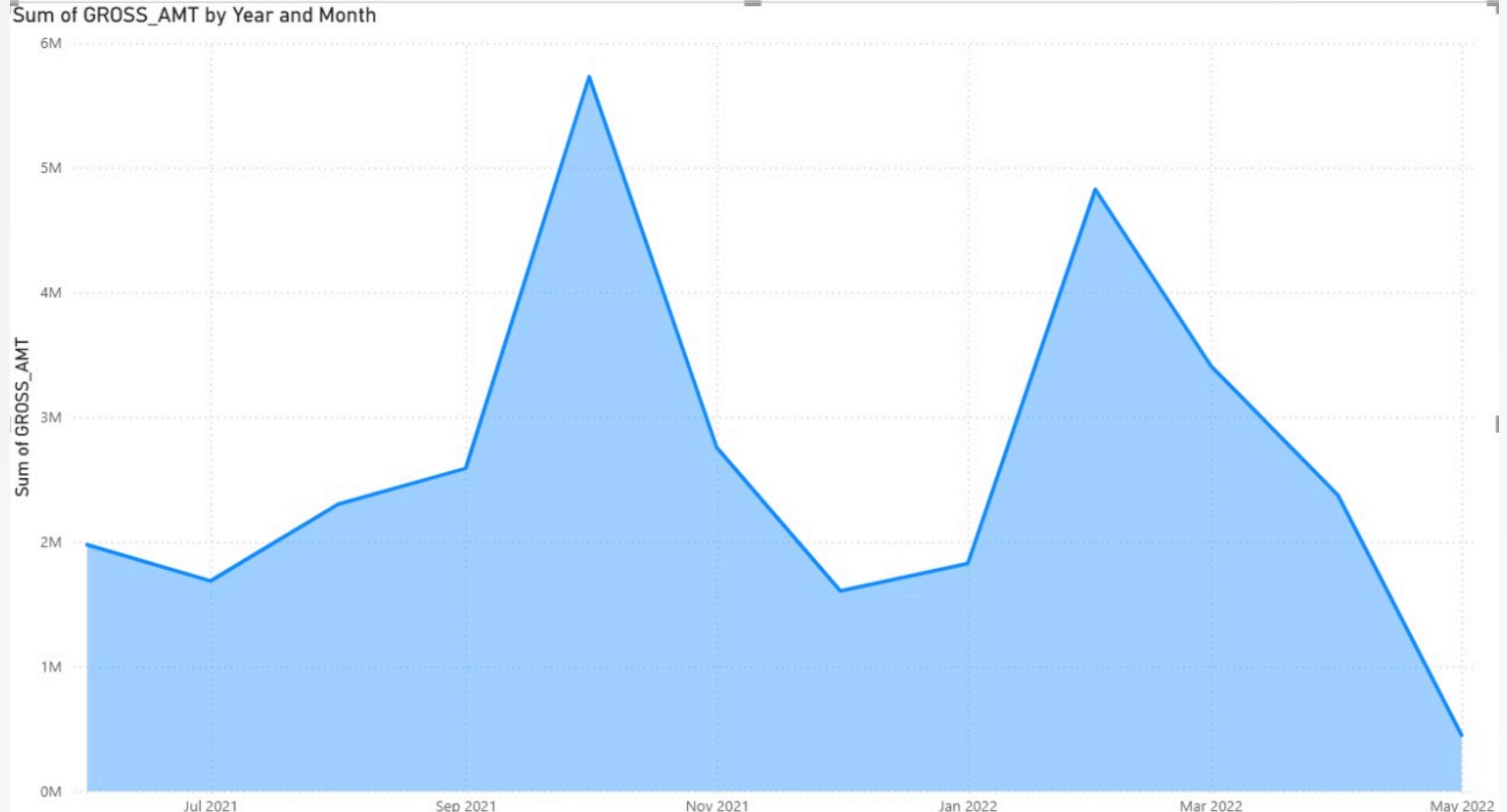
STATISTICS

Sum of GROSS_AMT and Sum of Qty by CUSTOMER



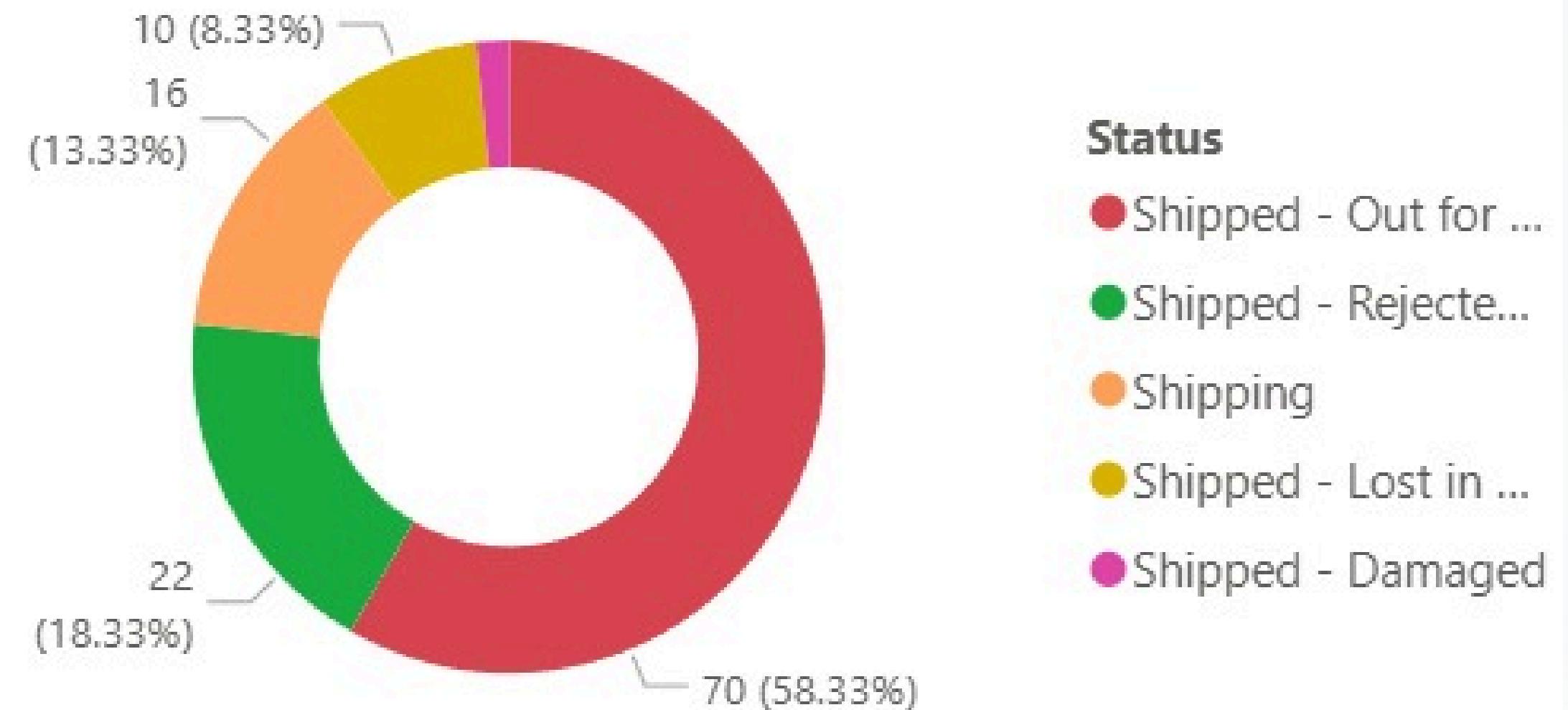


STATISTICS



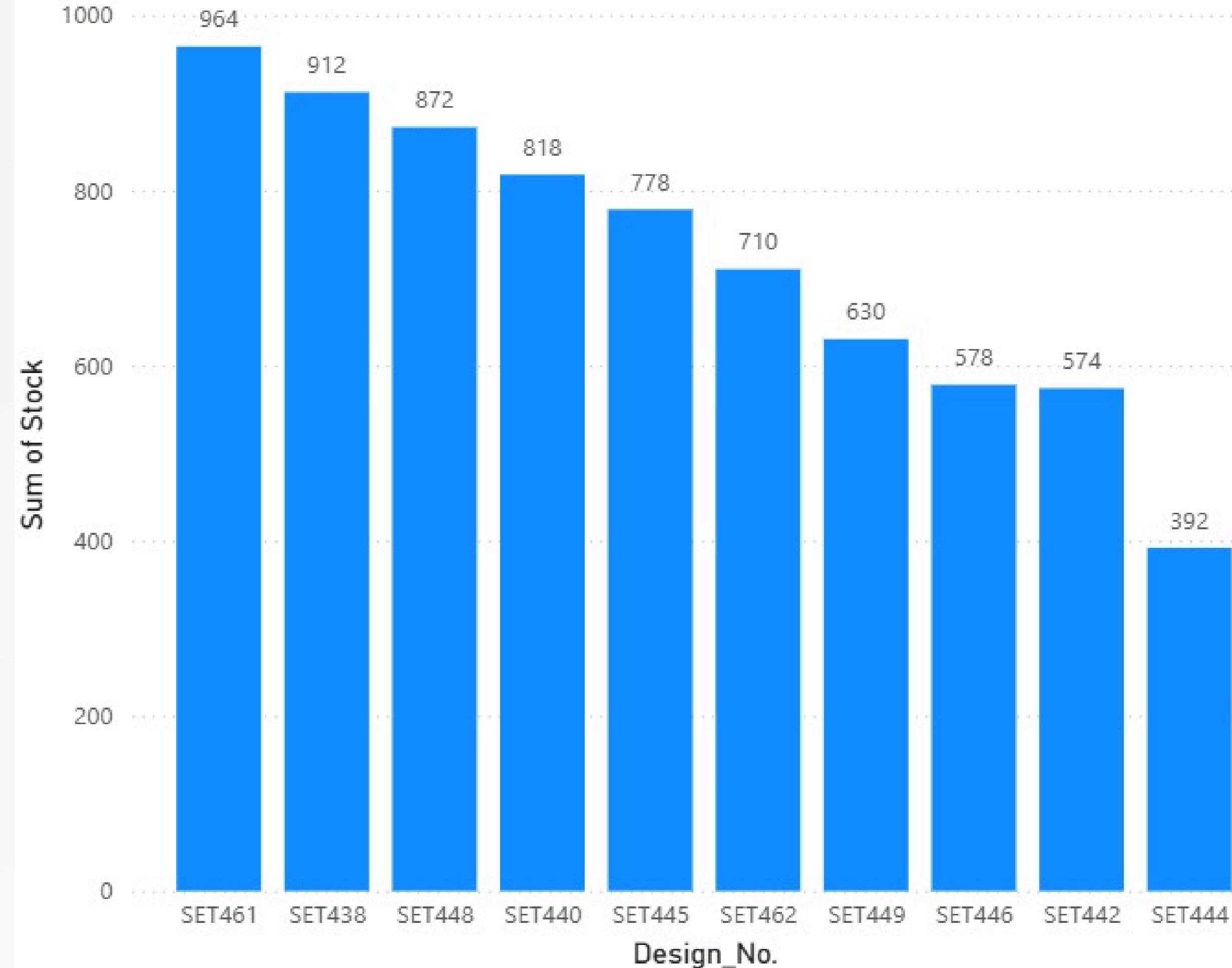
Count of Order_ID by Status

STATISTICS



Sum of Stock by Design_No.

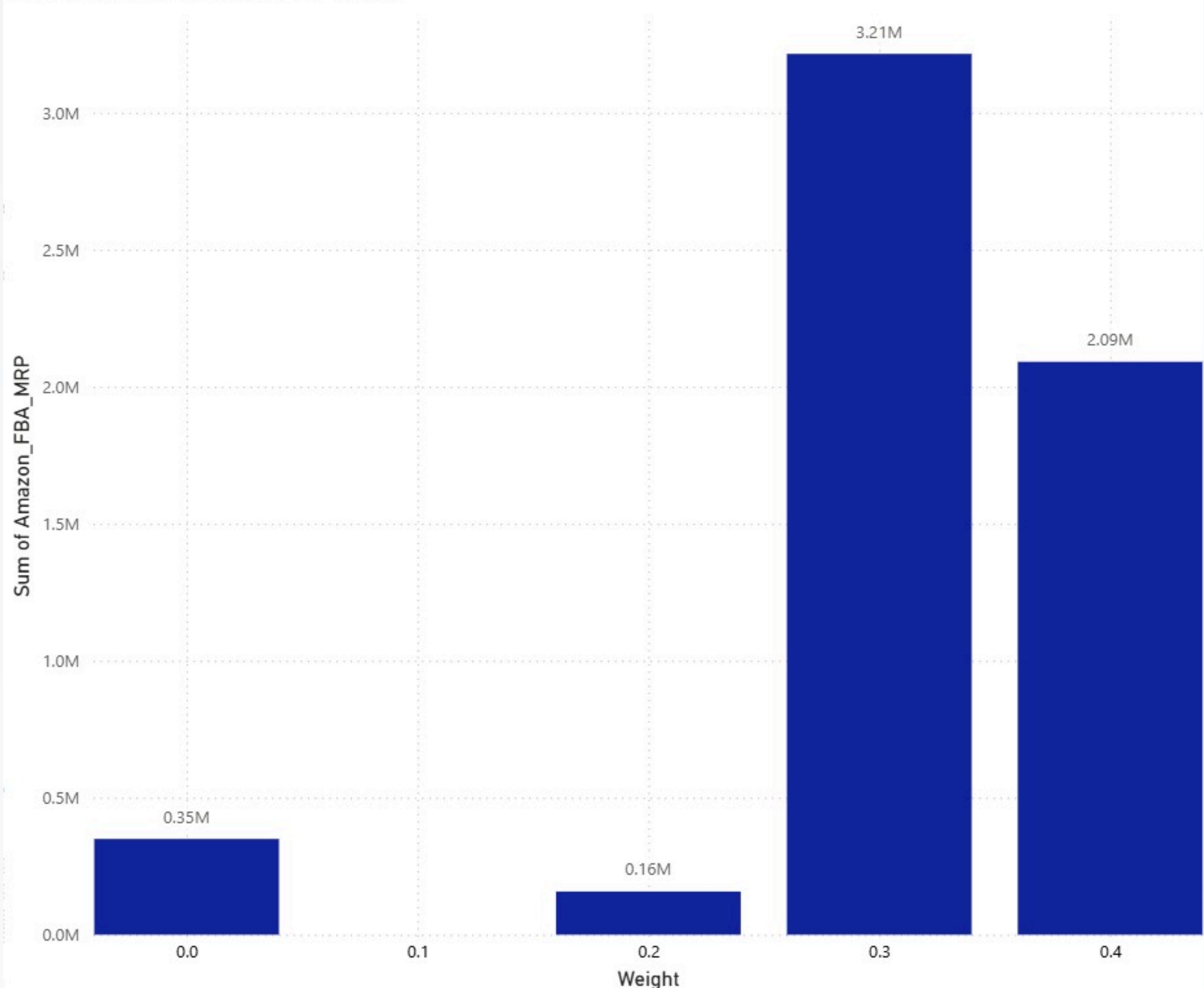
STATISTICS



STATISTICS



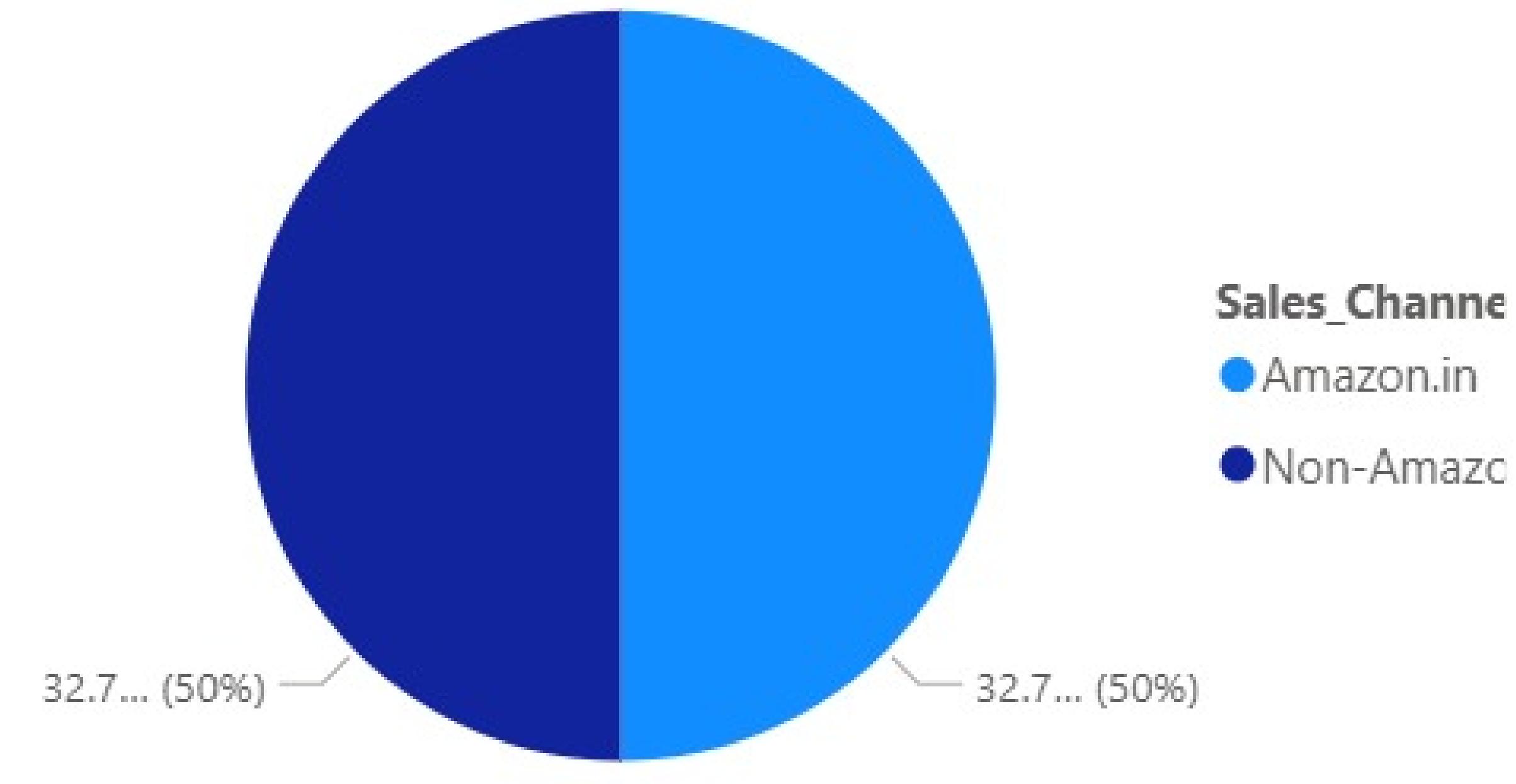
Sum of Amazon_FBA_MRP by Weight



STATISTICS



Sum of GROSS_AMT by Sales_Channel_



LIVE DEMO

```
        $access == false ) {  
        // Remove the rule as there is currently no need for it  
        $details['access'] = !$access;  
        $this->_sql->delete( 'acl_rules', $details );  
    } else {  
        // Update the rule with the new access value  
        $this->_sql->update( 'acl_rules', array( 'access' => $access ),  
            array( 'id' => $rule_id ) );  
    }  
}  
return true;  
}
```

