

FileEditSelectionView

retail_analysis_project

EXPLORER

RETAIL_ANALYSIS_PROJECT

analysis.ipynb

clean_transactions.csv

online_retail.csv

output.png

output1.png

output2.png

project.pbix

rfm_full.csv

segment_summary.csv

OUTLINE

TIMELINE

analysis.ipynb

analysis.ipynb > Business Impact Analysis > Growth Opportunity > df_clean.to_

GenerateCodeMarkdownRun AllPython 3.14.3

[32]

segment_summary

Python

	Monetary	Recency	Frequency	Customer_Count
Segment				
Others	4050926.172	62.724725	3.598258	2641
Champions	3905165.910	5.445402	18.247126	348
At Risk	519408.572	217.897653	1.101408	1065
Loyal Customers	435907.250	6.403509	5.298246	285

[33]

others_avg = segment_summary.loc["Others", "Revenue_per_Cust
champion_avg = segment_summary.loc["Champions", "Revenue_per

conversion_rate = 0.10
others_count = segment_summary.loc["Others", "Customer_Count

Python

CHAT

SESSIONS

analysis.ipynb • Cell 45

Describe what to build next

Auto

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FileEditSelectionView

retail_analysis_project

analysis.ipynb

analysis.ipynb > Business Impact Analysis > Growth Opportunity > df_clean.to_csv('loyal_customers.csv')

GenerateCodeMarkdownRun AllPython 3.14.3

Loyal Customers: 285

Name: count, dtype: int64

```
segment_summary = rfm.groupby("Segment").agg({
    "Monetary": "sum",
    "Recency": "mean",
    "Frequency": "mean"
}).sort_values(by="Monetary", ascending=False)

segment_summary
```

[30]Python

	Monetary	Recency	Frequency
Segment			
Others	4050926.172	62.724725	3.598258
Champions	3905165.910	5.445402	18.247126
At Risk	519408.572	217.897653	1.101408
Loyal Customers	435907.250	6.403509	5.298246

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OUTLINE

TIMELINE

analysis.ipynb

analysis.ipynb > M↓ Business Impact Analysis > M↓ Growth Opportunity > df_clean.to_

Generate + Code + Markdown | Run All ... Python 3.14.3

```
... np.int64(182)
```

Merge RFM back with monetary
segment_revenue = rfm.groupby("RFM_Score")["Monetary"].sum()

segment_revenue.head(10)

[26] Python

```
... RFM_Score  
555    3905165.91  
455    1087837.30  
355     423612.53  
535     186132.62  
444     170442.59  
445     165910.09  
545     133338.84  
554     128104.86  
345     126134.32  
544     124380.56  
Name: Monetary, dtype: float64
```

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EXPLORER

RETAIL_ANALYSIS_PROJECT

analysis.ipynb

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OUTLINE

TIMELINE

analysis.ipynb

analysis.ipynb > Business Impact Analysis > Growth Opportunity > df_clean.to_

GenerateCodeMarkdownRun AllPython 3.14.3

```
df_clean["InvoiceDate"] = pd.to_datetime(df_clean["InvoiceDa

df_clean.info()
```

[11]Python

```
<class 'pandas.DataFrame'>
Index: 397924 entries, 0 to 541908
Data columns (total 9 columns):
#   Column          Non-Null Count  Dtype
---  ---
0   InvoiceNo        397924 non-null  str
1   StockCode       397924 non-null  str
2   Description     397924 non-null  str
3   Quantity        397924 non-null  int64
4   InvoiceDate      397924 non-null  datetime64[us]
5   UnitPrice       397924 non-null  float64
6   CustomerID      397924 non-null  float64
7   Country         397924 non-null  str
8   Revenue         397924 non-null  float64
dtypes: datetime64[us](1), float64(3), int64(1), str(4)
memory usage: 30.4 MB
```

CHAT

SESSIONS

analysis.ipynb • Cell 45

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File

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Modeling

View

Optimize

Help

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Data

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Sensitivity ▾

Sensitivity

Publish

Share

Prep data for Copilot

Copilot

Executive Revenue Overview RFM-Based Customer Segmentation Analysis

8.91M

Total Revenue

4339

Total Customers

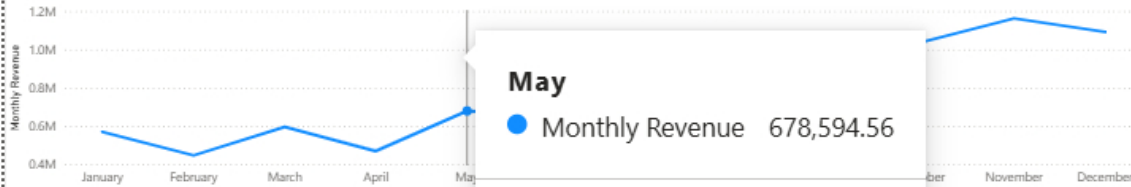
3.91M

Champions Re

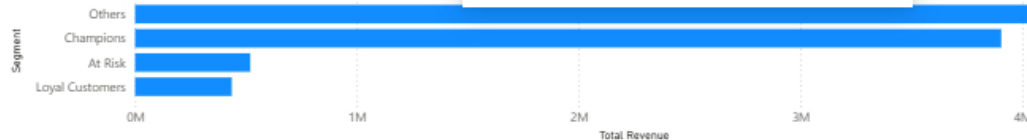
510

Lev

Monthly Revenue by Month



Total Revenue by Segment



Total Customers by Segment



Executive Overview

Customer Intelligence



Paste

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Get data

Excel workbook

OneLake catalog

SQL Server

Enter data

Dataverse

Recent sources

Data

Transform data

Refresh data

Queries

New visual

Text box

More visuals

Insert

New visual calculation

New measure

Quick measure

Calculations

Sensitivity

Sensitivity

Publish

Share

Prep data for Copilot AI

Copilot

Customer Intelligence Dashboard RFM-Based Revenue Analysis

CustomerID	Segment	Monetary	Frequency	Recency	CLV_Proxy
14911	Champions	143,825.06	201	1	28,908,837.06
18102	Champions	259,657.30	60	1	15,579,438.00
14646	Champions	280,206.02	74	2	10,367,622.74
12748	Champions	33,719.73	210	1	7,081,143.30
15311	Champions	60,767.90	91	1	5,529,878.90
17949	Champions	58,510.48	45	1	2,632,971.60
17841	Champions	40,991.57	124	2	2,541,477.34
13798	Champions	37,153.85	57	1	2,117,769.45
13089	Champions	58,825.83	97	3	1,902,035.17
14606	Champions	12,156.65	93	1	1,130,568.45
17450	Champions	194,550.79	46	8	1,118,667.04
17389	Champions	31,833.68	34	1	1,082,345.12

Filter by Segment

Segment

All

At Risk

Champions

Loyal Customers

Others

Top 20 Customers by CLV

