

# Online Rental

Data Exploration & Customer Relationship  
Management (CRM)

# Methodology

## **1.Calculating RFM Values:**

Determine Recency, Frequency, and Monetary values for each customer.

## **1.Segmentation:**

Group customers based on RFM Scores to identify distinct segments.

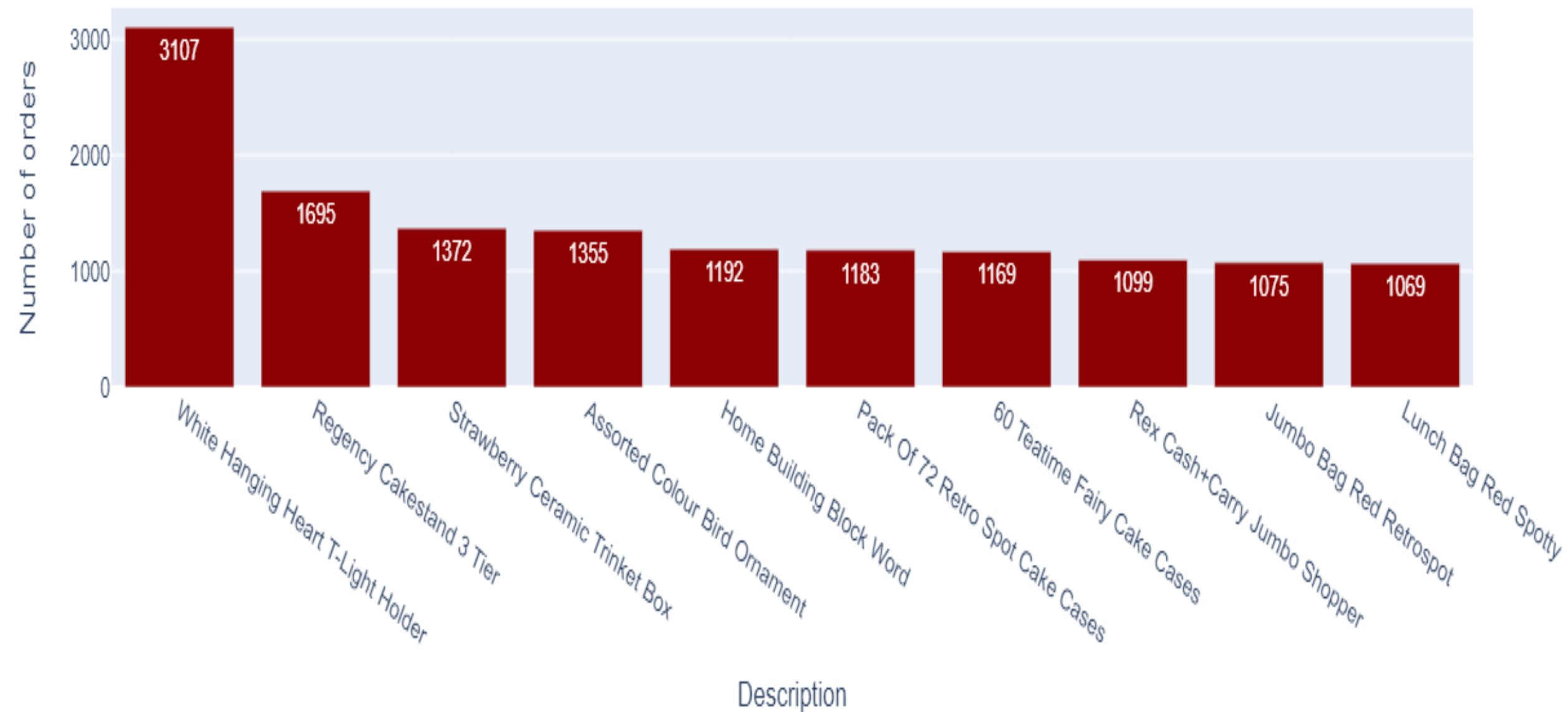
## **Personalization:**

Tailor marketing strategies to address the needs and preferences of specific customer segments.

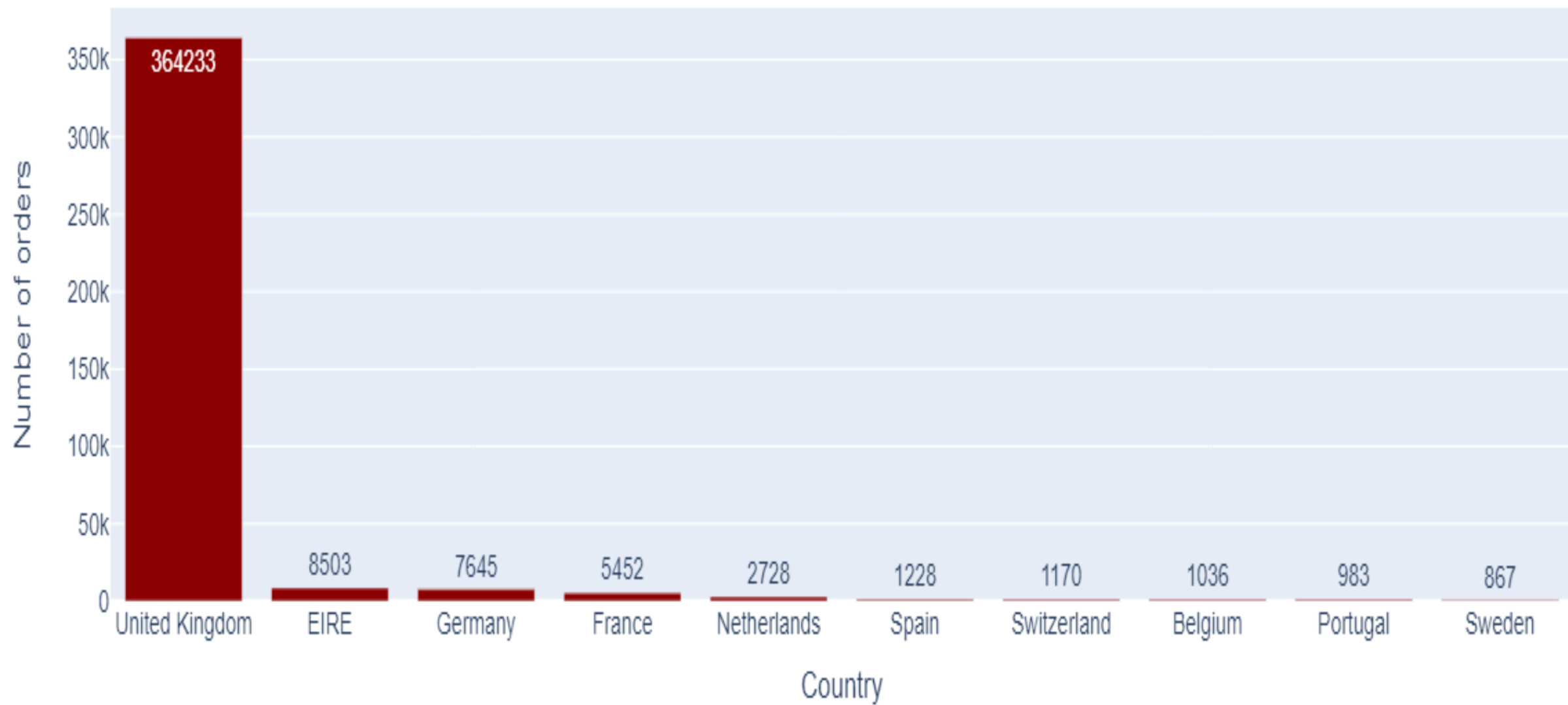
# Benefits

- Enhanced understanding of customer behaviors and preferences.
- Targeted marketing campaigns leading to improved customer engagement.
- Deepened customer relationships through personalized interactions.

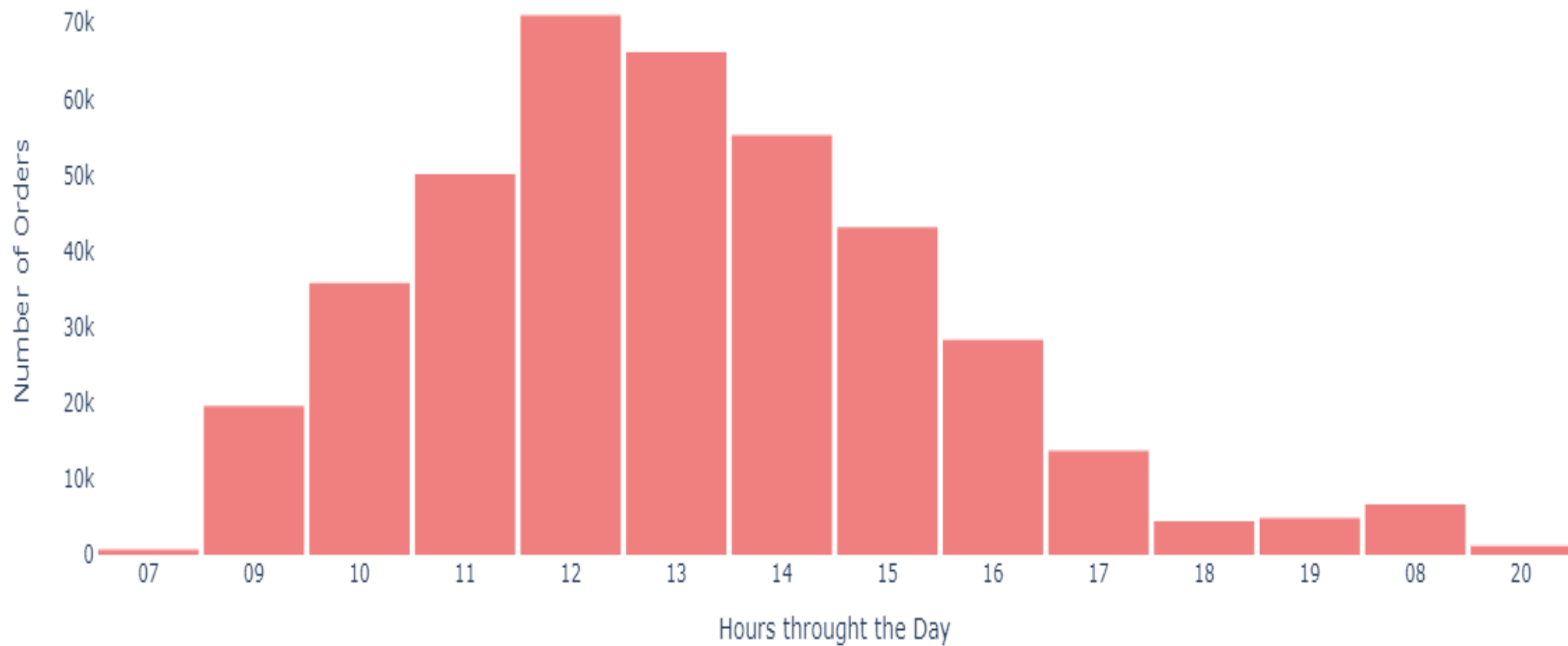
Top 10 Products in Sales



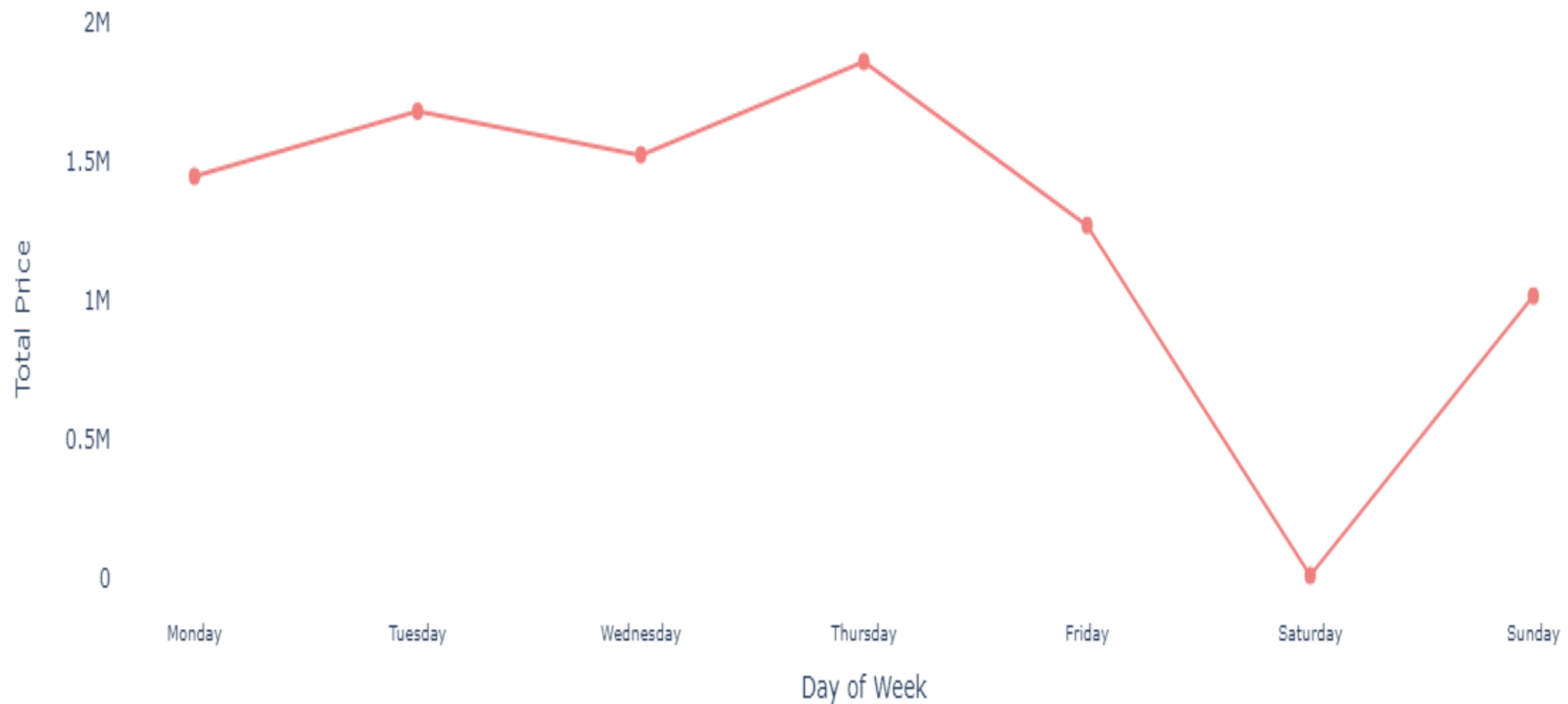
Top 10 Countries On Sales



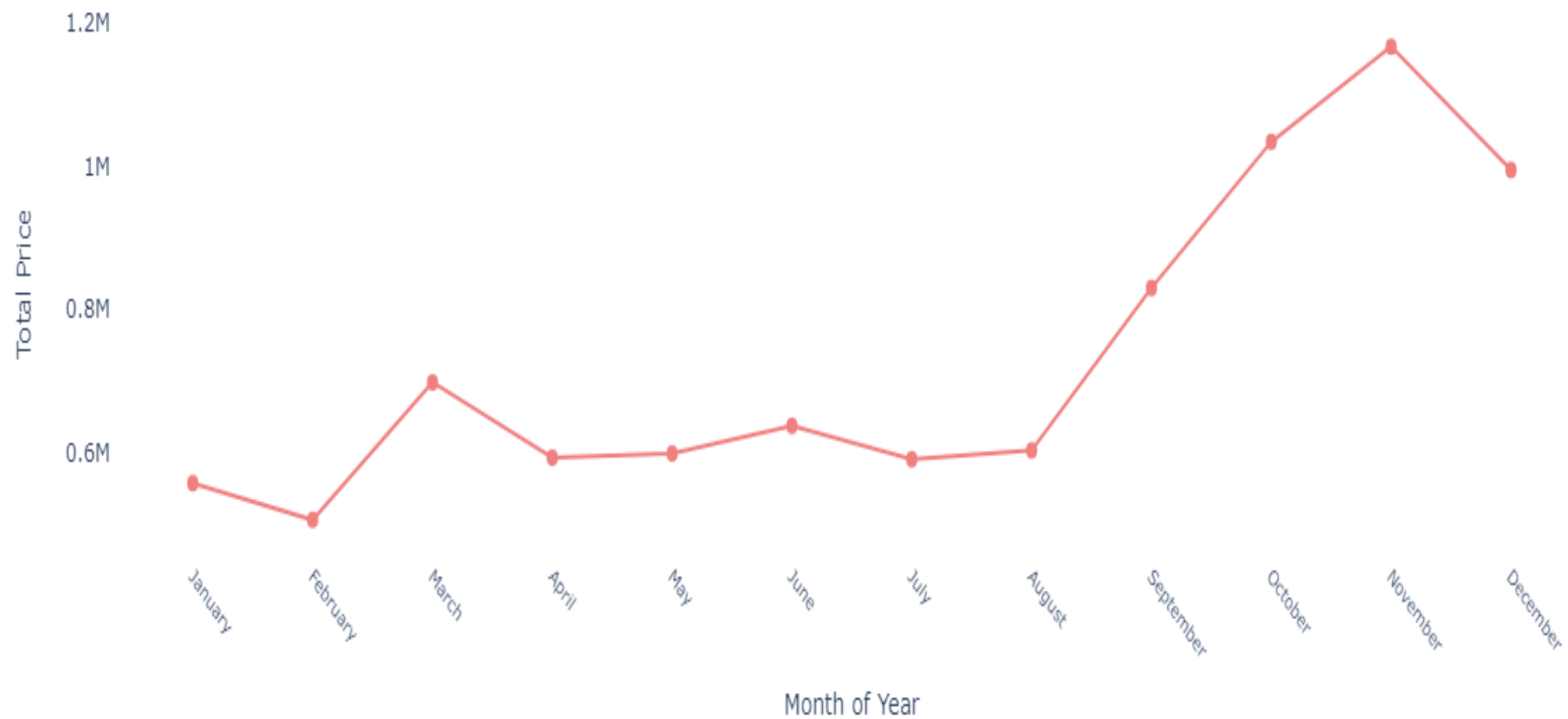
Number of Orders Per Hours



Total Sales by Days

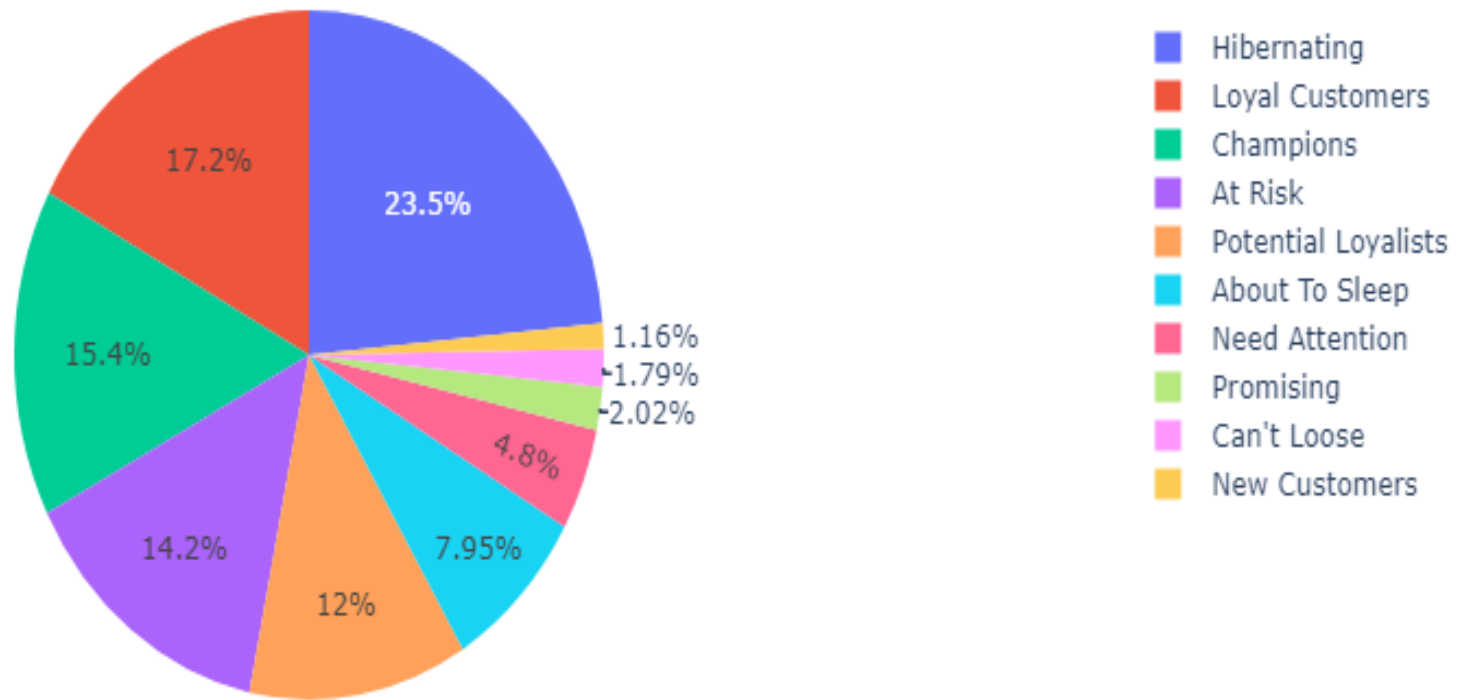


Total Sales by Month

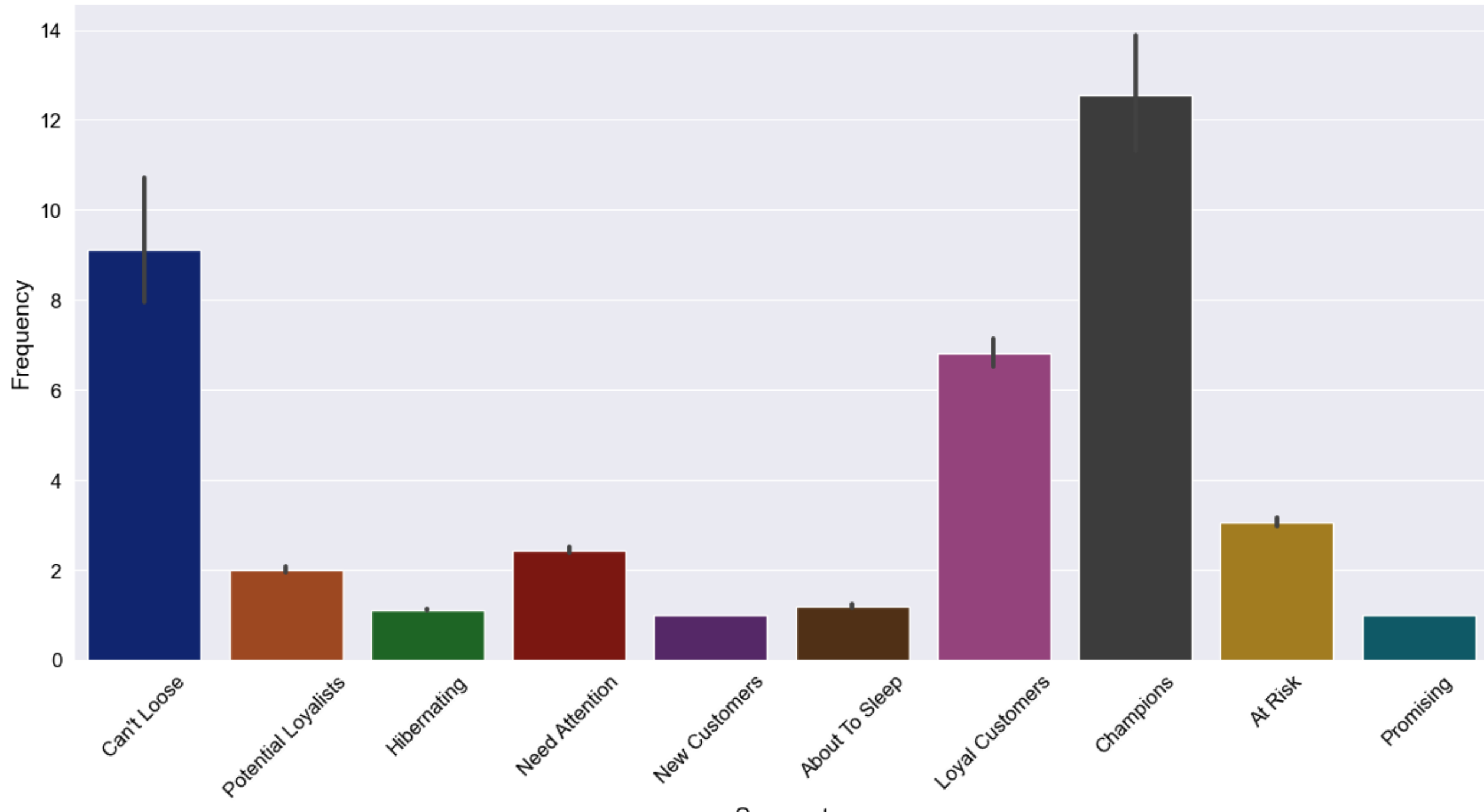




Number of Customers in Each Segment



Customer Segments by Frequency



```
df_RFM[["Segment", "Recency", "Frequency", "Montary"]].groupby("Segment").agg(["mean", "count", "sum"])
✓ 0.0s
```

	Recency			Frequency			Montary		
	mean	count	sum	mean	count	sum	mean	count	sum
Segment									
About To Sleep	52.819242	343	18117	1.201166	343	412	439.841370	343	150865.590
At Risk	151.158756	611	92358	3.073650	611	1878	1182.610738	611	722575.161
Can't Loose	123.116883	77	9480	9.116883	77	702	4079.670519	77	314134.630
Champions	6.119155	663	4057	12.553544	663	8323	6833.988738	663	4530934.533
Hibernating	212.885714	1015	216079	1.126108	1015	1143	402.466378	1015	408503.374
Loyal Customers	35.287062	742	26183	6.830189	742	5068	2732.385264	742	2027429.866
Need Attention	52.265700	207	10819	2.449275	207	507	1054.701787	207	218323.270
New Customers	7.580000	50	379	1.000000	50	50	383.674800	50	19183.740
Potential Loyalists	17.793037	517	9199	2.017408	517	1043	724.825629	517	374734.850
Promising	24.747126	87	2153	1.000000	87	87	362.629080	87	31548.730

# Business Analysis Solution

## About to Sleep

- **Mean Recency:** 53.819 days (343 customers)
- **Mean Frequency:** 1.201 (412 purchases)
- **Mean Monetary Value:** 441.320 (Total: 441.320 (*Total*: 151,372.760))

## Recommendations:

- Offer loyalty rewards or VIP programs to further incentivize their frequent purchases.
- Provide exclusive offers or early access to new products/services to maintain their engagement.

## New Customers

- **Mean Recency:** 8.580 days (50 customers)
- **Mean Frequency:** 1.000 (50 purchases)
- **Mean Monetary Value:** 386.199 (Total: 386.199 (*Total*: 19,309.960))

## Recommendations:

- Welcome them with a special discount or promotion for their next purchase to encourage repeat business.
- Implement an onboarding email series to introduce them to your products/services.

## Potential Loyalists

- **Mean Recency:** 18.793 days (517 customers)
- **Mean Frequency:** 2.017 (1043 purchases)
- **Mean Monetary Value:** 729.511 (Total: 729.511 (*Total*: 377,157.180))

### Recommendations:

- Offer incentives for increasing their frequency of purchases, such as referral bonuses or points-based rewards.
- Provide personalized product recommendations based on their past purchases to enhance their shopping experience.

## At Risk

- **Mean Recency:** 152.159 days (611 customers)
- **Mean Frequency:** 3.074 (1878 purchases)
- **Mean Monetary Value:** 1188.878 (Total: 1188.878 (*Total*: 726,404.651))
- **Recommendations:**
  - Implement targeted re-engagement campaigns to remind them of your value proposition.
  - Offer personalized discounts or promotions to encourage repeat purchases.



## Hibernating

- **Mean Recency:** 213.886 days (1015 customers)
- **Mean Frequency:** 1.126 (1143 purchases)
- **Mean Monetary Value:** 403.978 (Total: 403.978 (*Total*: 410,037.504))

## Recommendations:

- Reach out with personalized win-back offers or discounts to encourage them to return.
- Conduct surveys or feedback sessions to understand why they stopped purchasing and address any concerns.

These recommendations are tailored to each segment's behavior and value, aiming to optimize marketing strategies and improve customer retention and satisfaction.