Chocolate Sales Analysis

Raw file download link: https://www.kaggle.com/datasets/atharvasoundankar/chocolate-sales

or

Visit My Git-Hub account (PowerBi Projects)

Data OverView:

Sales Person	Country	Product	Date	Amount	Boxes Shipped
Jehu Rudeforth	UK	Mint Chip	04-Jan-22	$5,320	180
Van Tuxwell	India	85% Dark	01-Aug-22	$7,896	94
Gigi Bohling	India	Peanut Bu	07-Jul-22	$4,501	91
Jan Morforth	Australia	Peanut Bu	27-Apr-22	$12,726	342
Jehu Rudeforth	UK	Peanut Bu	24-Feb-22	$13,685	184
Van Tuxwell	India	Smooth Sl	06-Jun-22	$5,376	38
Oby Sorrel	UK	99% Dark	25-Jan-22	$13,685	176
Gunar Cockshoot	Australia	After Nine	24-Mar-22	$3,080	73
Jehu Rudeforth	New Zeal	50% Dark	20-Apr-22	$3,990	59
Brien Boise	Australia	99% Dark	04-Jul-22	$2,835	102
Rafaelita Blaksland	UK	Smooth Sl	13-Jan-22	$4,704	62
Barr Faughny	USA	Orange Ch	10-Mar-22	$3,703	11
Mallorie Waber	Canada	Eclairs	13-Jan-22	$1,442	286
Karlen McCaffrey	New Zeal	Drinking C	28-Jul-22	$168	156
Marney O'Breen	New Zeal	Peanut Bu	03-Aug-22	$8,379	173
Beverie Moffet	Australia	Organic Ch	26-Jan-22	$6,790	356
Van Tuxwell	Canada	Organic Ch	14-Feb-22	$4,067	42

Data Cleaning & Data Manipulation

Data importing in Python(pandas):

```python
import pandas as pd
import matplotlib.pyplot as plt
```

```python
df = pd.read_csv('Chocolate Sales.csv',encoding = 'latin-1')
```

checking for null values:

```python
df.isnull().sum()
```

```
ï»¿Sales Person    0
Country            0
Product            0
Date               0
Amount             0
Boxes Shipped      0
dtype: int64
```

Renaming Column:

```python
df.rename(columns={'ï»¿Sales Person': 'Sales Person'}, inplace=True)
```

```python
df.head()
```

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
0	Jehu Rudeforth	UK	Mint Chip Choco	2022-01-04	$5,320	180
1	Van Tuxwell	India	85% Dark Bars	2022-08-01	$7,896	94
2	Gigi Bohling	India	Peanut Butter Cubes	2022-07-07	$4,501	91
3	Jan Morforth	Australia	Peanut Butter Cubes	2022-04-27	$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	2022-02-24	$13,685	184

Converting the Amount (string) to float for Analysis

```python
#converting the Amount (string) to float
df['Amount'] = df['Amount'].replace('[/$,]', '', regex=True).astype(float)
```

```python
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1094 entries, 0 to 1093
Data columns (total 6 columns):
 #   Column         Non-Null Count  Dtype
---  ------         --------------  -----
 0   Sales Person   1094 non-null   object
 1   Country        1094 non-null   object
 2   Product        1094 non-null   object
 3   Date           1094 non-null   datetime64[ns]
 4   Amount         1094 non-null   float64
 5   Boxes Shipped  1094 non-null   int64
dtypes: datetime64[ns](1), float64(1), int64(1), object(3)
memory usage: 51.4+ KB
```

Extracting Month , year, Day name from DATE

```python
df["Month"] = df["Date"].dt.month
```

```python
df["Year"] = df["Date"].dt.year
```

```python
df["Day_name"] = df["Date"].dt.day_name()
```

```python
df.head()
```

	Sales Person	Country	Product	Date	Amount	Boxes Shipped	Month	Year	Day_name
0	Jehu Rudeforth	UK	Mint Chip Choco	2022-01-04	5320.0	180	1	2022	Tuesday
1	Van Tuxwell	India	85% Dark Bars	2022-08-01	7896.0	94	8	2022	Monday
2	Gigi Bohling	India	Peanut Butter Cubes	2022-07-07	4501.0	91	7	2022	Thursday
3	Jan Morforth	Australia	Peanut Butter Cubes	2022-04-27	12726.0	342	4	2022	Wednesday
4	Jehu Rudeforth	UK	Peanut Butter Cubes	2022-02-24	13685.0	184	2	2022	Thursday

Saves the File as a 'CSV' file for Further Analysis IN POWERBI

```python
df.to_csv("Chocolate_sales.csv",index=False)
```

DAX functions:

- ***Total_sales*** *= SUM(Chocolate_sales[Amount])*

- ***Total Orders*** *= COUNT(Chocolate_sales[Product])*

- ***Product Sales %*** *= [Total_sales] / CALCULATE([Total_sales], ALL(Chocolate_sales[Product]))*

- ***Average_order_value*** *= DIVIDE([Total_sales],[Total Orders])*

- ***Average Boxes Shipped per Order*** *= DIVIDE(SUM(Chocolate_sales[Boxes Shipped]),[Total Orders])*

- ***Monthly Sales*** *= CALCULATE([Total_sales], VALUES(Chocolate_sales[Month]))*

CHOCOLATE SALES ANALYSIS DASHBOARD

Total Sales	Average Order Value	Total Orders	Avg Box Shipped
₹ 6.18M	5.65K	1094	162

Australia	India	UK
Canada	New Zealand	USA

03-01-2022
31-08-2022

Product Sales %

Mint Chip Choco 9.08%
Smooth Sliky Salty 11.18%
Spicy Special Slims 9.38%
50% Dark Bites 10.92%
Organic Choco Syrup 9.42%
White Choc 10.52%
85% Dark Bars 9.56%
Peanut Butter Cubes 10.38%
99% Dark & Pure 9.58%
Eclairs 9.99%

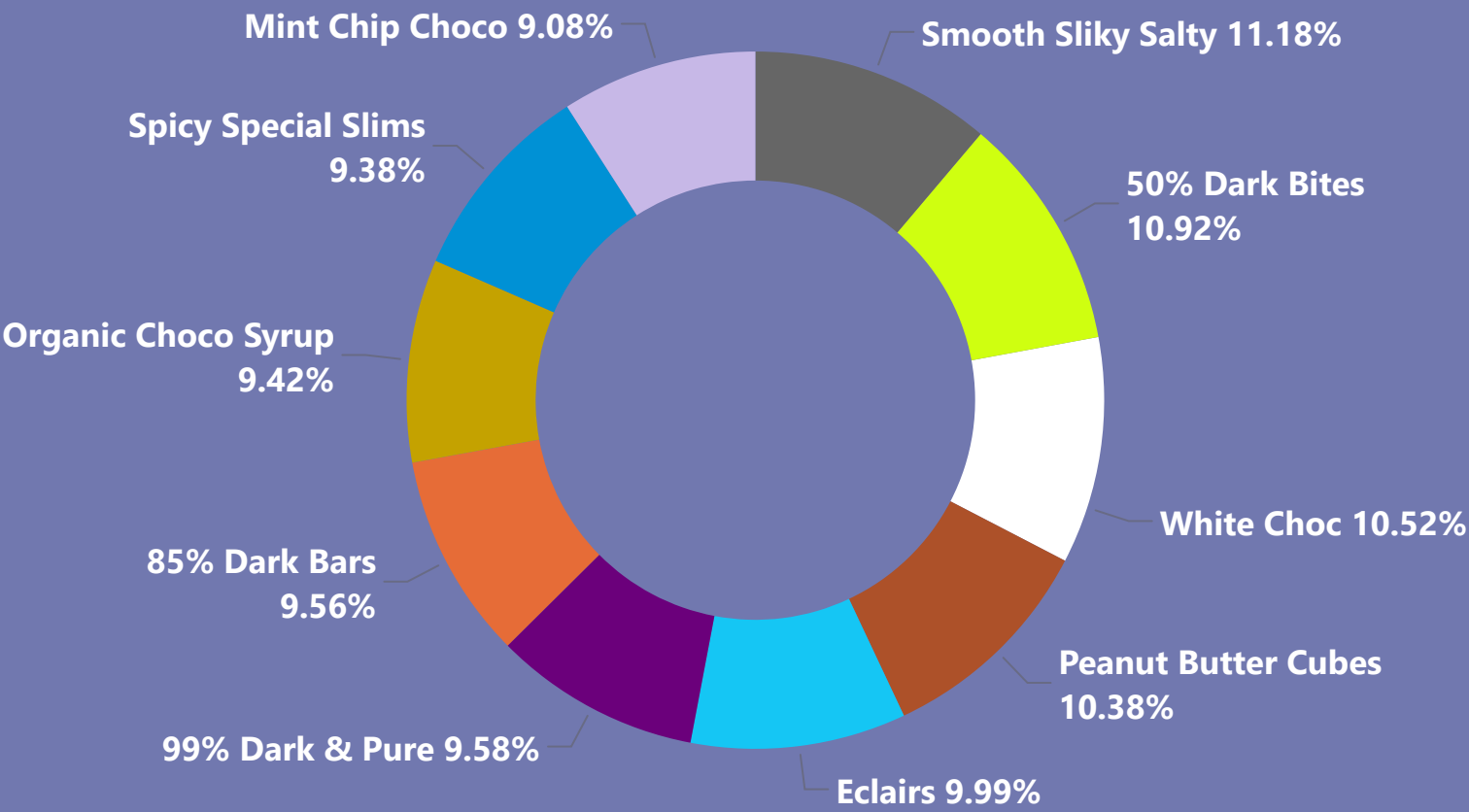## Sales Percentage by Product

Product	Product Sales %
Smooth Sliky Salty	5.66%
50% Dark Bites	5.53%
White Choc	5.32%
Peanut Butter Cubes	5.25%
Eclairs	5.05%
99% Dark & Pure	4.85%
85% Dark Bars	4.84%
Organic Choco Syrup	4.77%
Spicy Special Slims	4.75%
Mint Chip Choco	4.59%
Almond Choco	4.49%
Manuka Honey Choco	4.46%
Milk Bars	4.35%
Raspberry Choco	4.28%
After Nines	4.23%
Fruit & Nut Bars	4.19%
Drinking Coco	4.15%
Orange Choco	4.14%
Baker's Choco Chips	4.04%
Choco Coated Almonds	3.91%
Caramel Stuffed Bars	3.75%
70% Dark Bites	3.42%
Total	**100.00%**

TOP 5 Sales Person

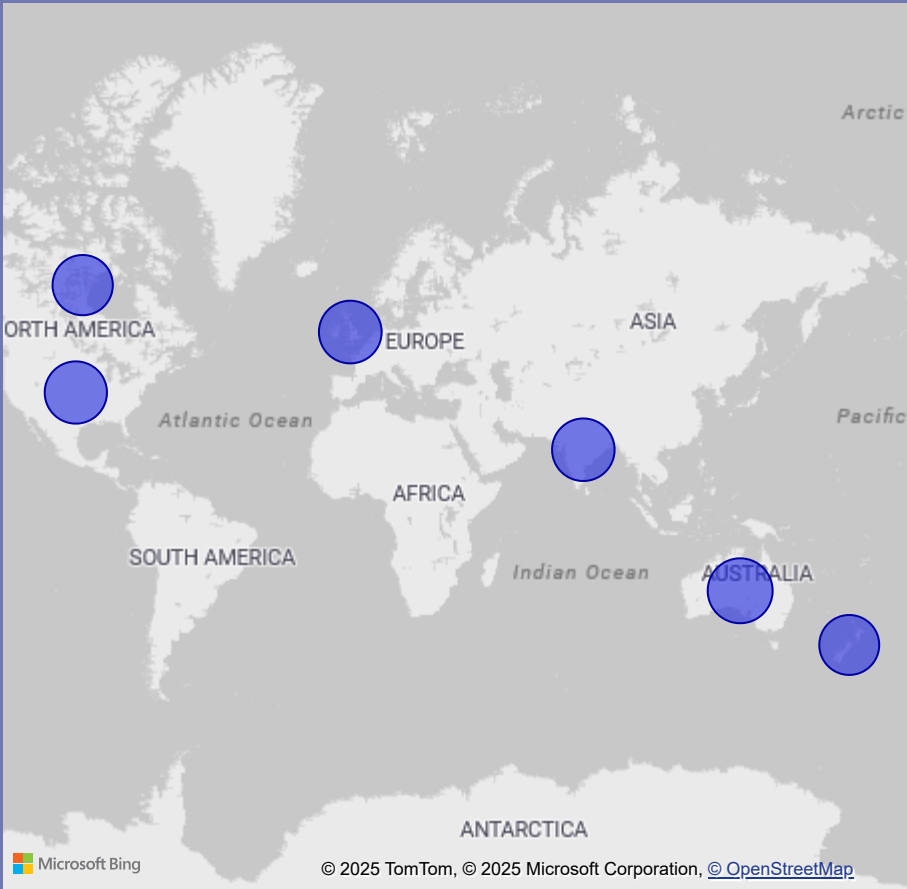| Sales Person	Total_sales
Ches Bonnell	₹ 3,20,901
Oby Sorrel	₹ 3,16,645
Madelene Upcott	₹ 3,16,099
Brien Boise	₹ 3,12,816
Kelci Walkden	₹ 3,11,710

Top 10 Products

Product	Sales
Smooth Sliky Salty	₹ 0.35M
50% Dark Bites	₹ 0.34M
White Choc	₹ 0.33M
Peanut Butter Cubes	₹ 0.32M
Eclairs	₹ 0.31M
99% Dark & Pure	₹ 0.30M
85% Dark Bars	₹ 0.30M
Organic Choco Syrup	₹ 0.29M
Spicy Special Slims	₹ 0.29M
Mint Chip Choco	₹ 0.28M

Total_sales by Country

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Monthly Sales

January	February	March	April	May	June	July	August
₹ 0.90M	₹ 0.70M	₹ 0.75M	₹ 0.67M	₹ 0.75M	₹ 0.87M	₹ 0.80M	₹ 0.74M