BRIGHT
COFFEE

SHOP

Sales Analysis Presentation

METHODOLOGY DOCUMENT

Syntaxes on Snowflake

1. Running the table one after loading it on Snowflake

| | BRIGHTCOFFEESHOP.PUBLIC ⌄ | Settings ⌄ | | | | | | | Q |

```
1   SELECT*FROM "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP"
2   LIMIT 10;
3
```

↳ Results   ⌁ Chart

	# TRANSACTION_ID	⏱ TRANSACTION_DATE	⏱ TRANSACTION_TIME	# TRANSACTION_QTY	# STORE_ID	A STORE_LOCATION	# PRODUCT_ID	# UNIT_PRICE
1	1	2023-01-01	07:06:11	2	5	Lower Manhattan	32	3.00
2	2	2023-01-01	07:08:56	2	5	Lower Manhattan	57	3.10
3	3	2023-01-01	07:14:04	2	5	Lower Manhattan	59	4.50
4	4	2023-01-01	07:20:24	1	5	Lower Manhattan	22	2.00
5	5	2023-01-01	07:22:41	2	5	Lower Manhattan	57	3.10
6	6	2023-01-01	07:22:41	1	5	Lower Manhattan	77	Ask Copilot

2. Checking the data types of all the columns

| | BRIGHTCOFFEESHOP.PUBLIC ⌄ | Settings ⌄ | | | | | | | Q |

```
3
4    ---Syntax to see the datatypes of all the columns
5   DESCRIBE TABLE "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP";
6
```

↳ Results   ⌁ Chart

	A name	A type	A kind	A null?	A default	A primary key	A unique key	A check	A expression	A com
1	TRANSACTION_ID	NUMBER(38,0)	COLUMN	Y	null	N	N	null	null	null
2	TRANSACTION_DATE	DATE	COLUMN	Y	null	N	N	null	null	null
3	TRANSACTION_TIME	TIME(9)	COLUMN	Y	null	N	N	null	null	null
4	TRANSACTION_QTY	NUMBER(38,0)	COLUMN	Y	null	N	N	null	null	null
5	STORE_ID	NUMBER(38,0)	COLUMN	Y	null	N	N	null	null	null
6	STORE_LOCATION	VARCHAR(1677721	COLUMN	Y	null	N	N	null	null	Ask Copilot

3. Counting the number of unique transactions

```
BRIGHTCOFFEESHOP.PUBLIC  ∨      Settings  ∨

12
13    ---Syntax to count the number of unique transactions
14    SELECT COUNT(DISTINCT Transaction_ID) AS Unique_Transactions
15    FROM "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP";
16
```

↳ **Results**   ∿ Chart

UNIQUE_TRANSACTIONS
1   149116

4. Counting the number of rows in the table

```
BRIGHTCOFFEESHOP.PUBLIC  ∨      Settings  ∨

o
7
8     ---Syntax to count the number of rows in the table
9     SELECT COUNT(*) AS total_rows
10    FROM "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP";
11
```

↳ **Results**   ∿ Chart

TOTAL_ROWS
1   149116

5. Checking for entire rows that are duplicated

```
      BRIGHTCOFFEESHOP.PUBLIC  ∨      Settings  ∨
17
18    ---Checking for full rows that are duplicated
19    SELECT *, COUNT(*)
20    FROM "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP"
21    GROUP BY ALL
22    HAVING COUNT(*) > 1;
```

↳ Results	∿ Chart				
	TRANSACTION_ID	TRANSACTION_DATE	TRANSACTION_TIME	TRANSACTION_QTY	STORE_ID	STORE_L

Query produced no results

6. Checking for Nulls in all the coloums

```
      BRIGHTCOFFEESHOP.PUBLIC  ∨      Settings  ∨
25    ---Checking for Nulls in all the coloums
26    SELECT
27        COUNT(*) AS total_rows,
28        SUM(CASE WHEN Transaction_ID IS NULL THEN 1 ELSE 0 END) AS Transaction_ID_nulls,
29        SUM(CASE WHEN Store_ID IS NULL THEN 1 ELSE 0 END) AS Store_ID_nulls,
30        SUM(CASE WHEN Transaction_time IS NULL THEN 1 ELSE 0 END) AS Transaction_time_nulls,
31        SUM(CASE WHEN Transaction_date IS NULL THEN 1 ELSE 0 END) AS Transaction_date_nulls,
32        SUM(CASE WHEN Transaction_qty IS NULL THEN 1 ELSE 0 END) AS Transaction_qty_nulls,
33        SUM(CASE WHEN Store_location IS NULL THEN 1 ELSE 0 END) AS Store_location_nulls,
34        SUM(CASE WHEN Product_ID IS NULL THEN 1 ELSE 0 END) AS Product_ID_nulls,
35        SUM(CASE WHEN Unit_price IS NULL THEN 1 ELSE 0 END) AS Unit_price_nulls,
36        SUM(CASE WHEN Product_category IS NULL THEN 1 ELSE 0 END) AS Product_category_nulls,
37        SUM(CASE WHEN Product_type IS NULL THEN 1 ELSE 0 END) AS Product_type_nulls,
38        SUM(CASE WHEN Product_detail IS NULL THEN 1 ELSE 0 END) AS Product_detail_nulls
39    FROM "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP";
40
41
```

↳ Results	∿ Chart					
	# TOTAL_ROWS	# TRANSACTION_ID_NULLS	# STORE_ID_NULLS	# TRANSACTION_TIME_NULLS	# TRANSACTION_DATE_NULLS	# TRANSACTION_QTY_NULLS	# STORE
1	149116	0	0	0	0	0	

7. Earliest time of a sale

```
43    ---Earliest time of a sale
44    SELECT MIN(Transaction_Time)
45    FROM
46    "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP";
47
```

↳ Results   ∿ Chart

	🕐 MIN(TRANSACTION_TIME)
1	06:00:00

8. Latest time of a sale

```
50    ---Latest time of a sale
51    SELECT MAX(Transaction_Time)
52    FROM
53    "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP";
54
```

↳ Results   ∿ Chart

	🕐 MAX(TRANSACTION_TIME)
1	20:59:32

9. Adding a new permanent column called Time Buckets

```sql
56    ---Adding a new permanent column called Time Buckets
57    ALTER TABLE "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP"
58    ADD COLUMN Time_Buckets STRING;
59
```

10. Creating Time Buckets in hourly intervals

```sql
61      ---Time buckets on Hourly intervals
62      UPDATE "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP"
63      SET Time_Buckets = CASE
64        WHEN CAST(Transaction_time AS TIME) BETWEEN '06:00:00' AND '08:59:59' THEN 'Peak Morning Rush'
65        WHEN CAST(Transaction_time AS TIME) BETWEEN '09:00:00' AND '11:59:59' THEN 'Mid Morning'
66        WHEN CAST(Transaction_time AS TIME) BETWEEN '12:00:00' AND '15:59:59' THEN 'Afternoon'
67        WHEN CAST(Transaction_time AS TIME) BETWEEN '16:00:00' AND '17:59:59' THEN 'Peak Afternoon Rush'
68        WHEN CAST(Transaction_time AS TIME) BETWEEN '18:00:00' AND '21:00:00' THEN 'Evening'
69        ELSE 'Night'
70    END;
```

↳ **Results**   ∿ Chart

# number of rows updated	# number of multi-joined rows updated
1	149116	0

↳ **Results**   ∿ Chart

	RODUCT_ID	# UNIT_PRICE	A PRODUCT_CATEGORY	A PRODUCT_TYPE	A PRODUCT_DETAIL	A TIME_BUCKETS
1	32	3.00	Coffee	Gourmet brewed coffee	Ethiopia Rg	Peak Morning Rush
2	57	3.10	Tea	Brewed Chai tea	Spicy Eye Opener Chai L	Peak Morning Rush
3	59	4.50	Drinking Chocolate	Hot chocolate	Dark chocolate Lg	Peak Morning Rush
4	22	2.00	Coffee	Drip coffee	Our Old Time Diner Blen	Peak Morning Rush
5	57	3.10	Tea	Brewed Chai tea	Spicy Eye Opener Chai L	Peak Morning Rush
6	77	3.00	Bakery	Scone	Oatmeal Scone	Peak Morning Rush

11. Adding a new permanent column called Total Sales

```
76
77     ---Adding a new permanent column called Total Sales
78     ALTER TABLE "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP"
79     ADD COLUMN Total_Sales NUMBER;
80
```

BRIGHTCOFFEESHOP.PUBLIC ⌄   Settings ⌄

12. Calculating Total Sales using Transaction quantity and Unit price

BRIGHTCOFFEESHOP.PUBLIC ⌄   Settings ⌄

```
82     ---Calculating Total Sales using Transaction quantity and Unit price
83     UPDATE "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP"
84     SET Total_Sales = transaction_qty * unit_price;
85
86
```

BRIGHTCOFFEESHOP.PUBLIC ⌄   Settings ⌄

```
87
88
89     ---Checking new updated table with Total Sales as a new permanent column
90     SELECT*
91     FROM "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP";
92
```

↳ **Results**   ～ Chart

	T_PRICE	A PRODUCT_CATEGORY	A PRODUCT_TYPE	A PRODUCT_DETAIL	A TIME_BUCKETS	# TOTAL_SALES
1	3.00	Coffee	Gourmet brewed coffee	Ethiopia Rg	Peak Morning Rush	6
2	3.10	Tea	Brewed Chai tea	Spicy Eye Opener Chai L	Peak Morning Rush	6
3	4.50	Drinking Chocolate	Hot chocolate	Dark chocolate Lg	Peak Morning Rush	9
4	2.00	Coffee	Drip coffee	Our Old Time Diner Blen	Peak Morning Rush	2
5	3.10	Tea	Brewed Chai tea	Spicy Eye Opener Chai L	Peak Morning Rush	6
6	3.00	Bakery	Scone	Oatmeal Scone	Peak Morning Rush	3

13. Adding a new permanent column called Month ID

```
94    ---Adding a new permanent column called Month ID
95    ALTER TABLE "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP"
96    ADD COLUMN Month_ID STRING;
```

BRIGHTCOFFEESHOP.PUBLIC ∨   Settings ∨

14. Updating the Month ID column from the Transaction date column

BRIGHTCOFFEESHOP.PUBLIC ∨   Settings ∨

```
97
98    ---Updating the Month ID column from the Transaction date column
99    UPDATE "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP"
100   SET Month_ID = TO_CHAR(transaction_date, 'YYYYMM');
101
102   ---Checking new updated table with Month ID as a new permanent column
103   SELECT*
104   FROM "BRIGHTCOFFEESHOP"."PUBLIC"."BRIGHTCOFFEESHOP";
105
```

↳ Results   ∿ Chart

	PRODUCT_CATEGORY	A PRODUCT_TYPE	A PRODUCT_DETAIL	A TIME_BUCKETS	# TOTAL_SALES	A MONTH_ID
1	fee	Gourmet brewed coffee	Ethiopia Rg	Peak Morning Rush	6	202301
2		Brewed Chai tea	Spicy Eye Opener Chai L	Peak Morning Rush	6	202301
3	ıking Chocolate	Hot chocolate	Dark chocolate Lg	Peak Morning Rush	9	202301
4	fee	Drip coffee	Our Old Time Diner Blen	Peak Morning Rush	2	202301
5		Brewed Chai tea	Spicy Eye Opener Chai L	Peak Morning Rush	6	202301
6	:ery	Scone	Oatmeal Scone	Peak Morning Rush	3	202301

Graphs on Excel

1. Total Sales by Month

Total Sales for Jan-Jun 2023

Total Sales by Month
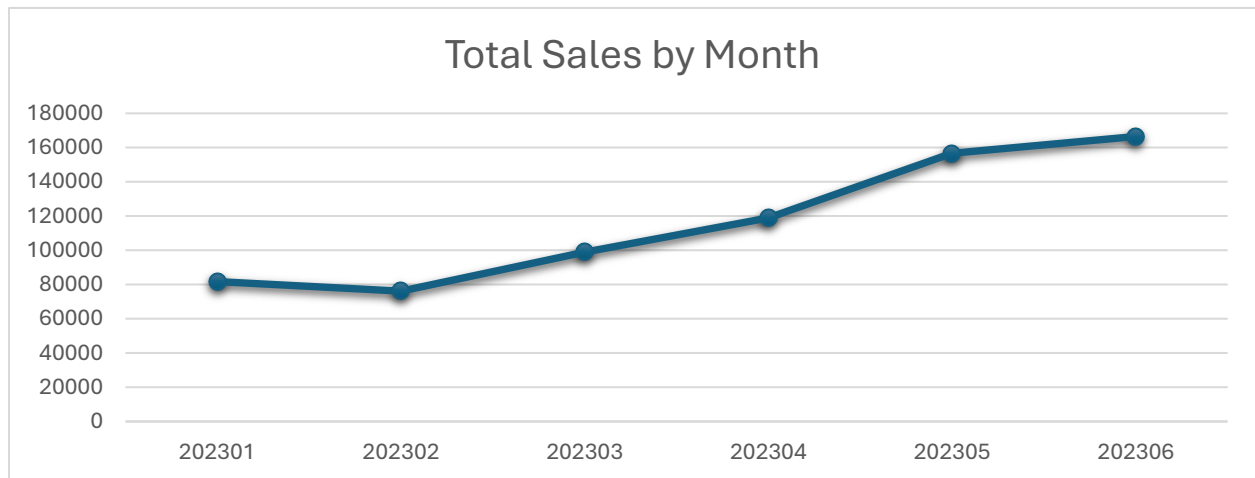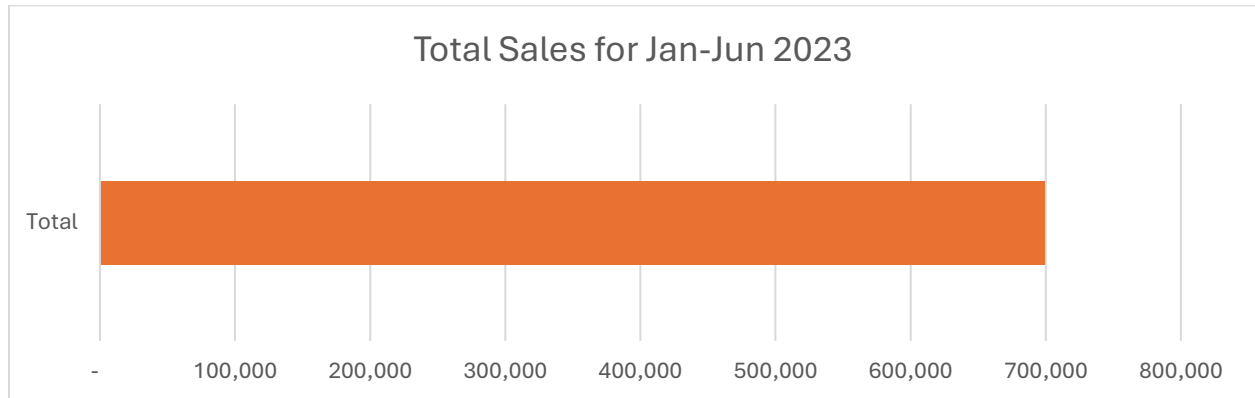
2. Total Sales by Location & Month

Total Sales by Location

- Astoria — 33%
- Hell's Kitchen — 34%
- Lower Manhattan — 33%

Total Sales by Month & Location

Legend: Lower Manhattan, Astoria, Hell's Kitchen

Y-axis: R0, R10,000, R20,000, R30,000, R40,000, R50,000, R60,000

X-axis: 202301, 202302, 202303, 202304, 202305, 202306

3. Total Sales by Weekday

Total Sales by Weekday
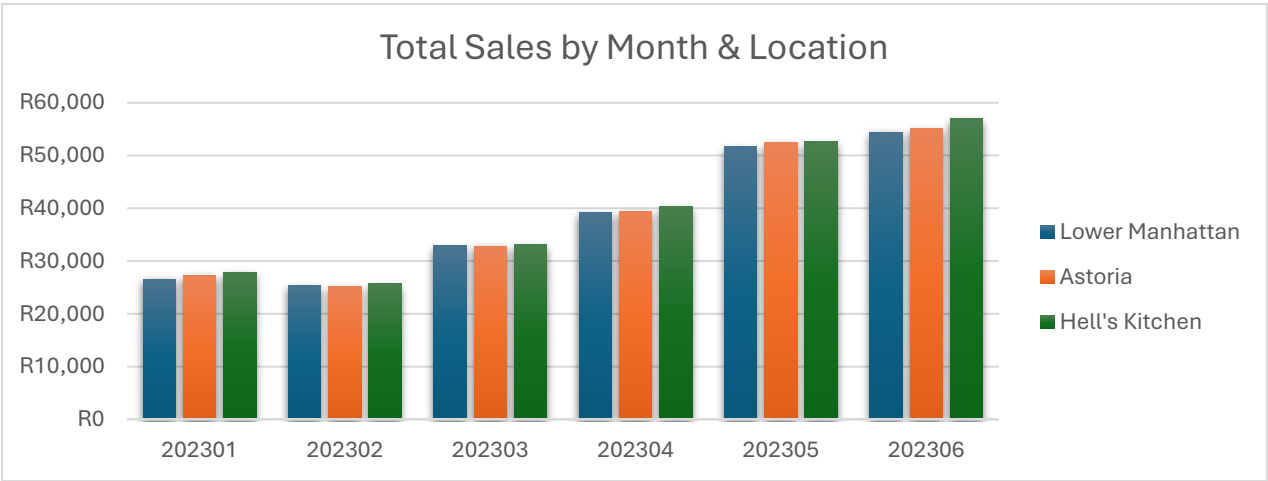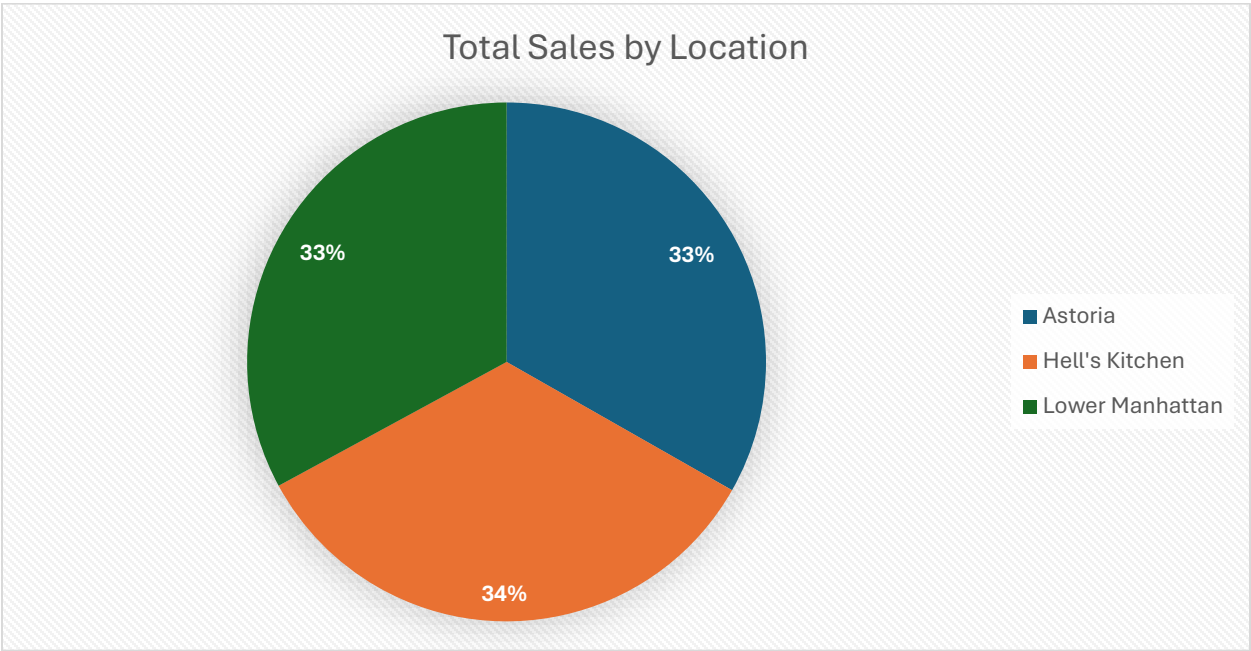
Percentage Count of Sales by Weekday
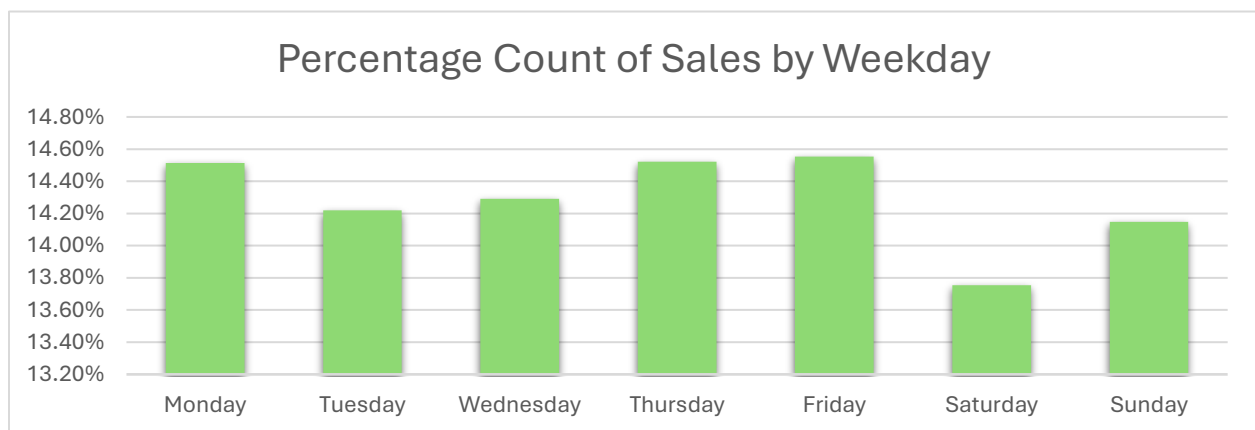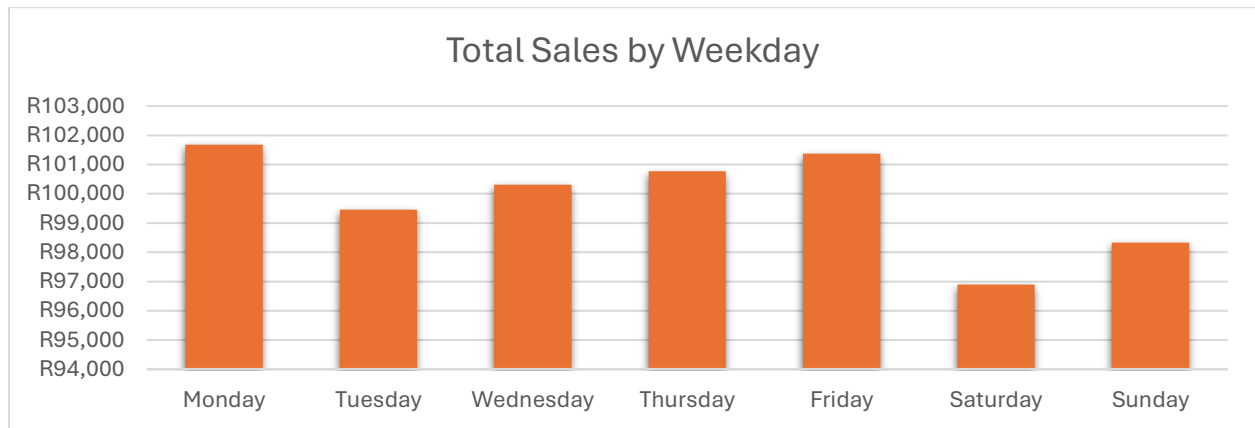
4. Time vs Weekday Trans Heat Map

Count of TOTAL_SALES2	Column							
Row Labels	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Grand Total
⊞6 AM	661	489	698	731	707	592	716	4,594
⊞7 AM	1,992	1,846	1,873	1,959	1,989	1,877	1,892	13,428
⊞8 AM	2,482	2,783	2,540	2,389	2,544	2,438	2,478	17,654
⊞9 AM	2,494	2,753	2,527	2,375	2,707	2,345	2,563	17,764
⊞10 AM	2,612	2,846	2,596	2,570	2,761	2,551	2,609	18,545
⊞11 AM	1,478	1,301	1,468	1,470	1,405	1,307	1,337	9,766
⊞12 PM	1,308	1,126	1,226	1,307	1,231	1,279	1,231	8,708
⊞1 PM	1,267	1,152	1,311	1,317	1,199	1,187	1,281	8,714
⊞2 PM	1,376	1,224	1,257	1,341	1,265	1,226	1,244	8,933
⊞3 PM	1,319	1,254	1,270	1,323	1,295	1,287	1,231	8,979
⊞4 PM	1,355	1,227	1,272	1,406	1,257	1,287	1,289	9,093
⊞5 PM	1,302	1,232	1,235	1,311	1,226	1,178	1,261	8,745
⊞6 PM	1,077	957	1,118	1,125	1,149	1,019	1,053	7,498
⊞7 PM	846	872	836	970	886	846	836	6,092
⊞8 PM	74	140	83	60	80	91	75	603
Grand Total	21,643	21,202	21,310	21,654	21,701	20,510	21,096	149,116

5. Time vs Time Buckets

Total Sales by Month & Time Buckets

Legend:
- Peak Morning Rush 6AM-9AM
- Mid Morning 9AM-12PM
- Afternoon 12PM-4PM
- Peak Afternoon Rush 4PM-5PM
- Evening 5PM-12AM

Total Sales by Time Buckets
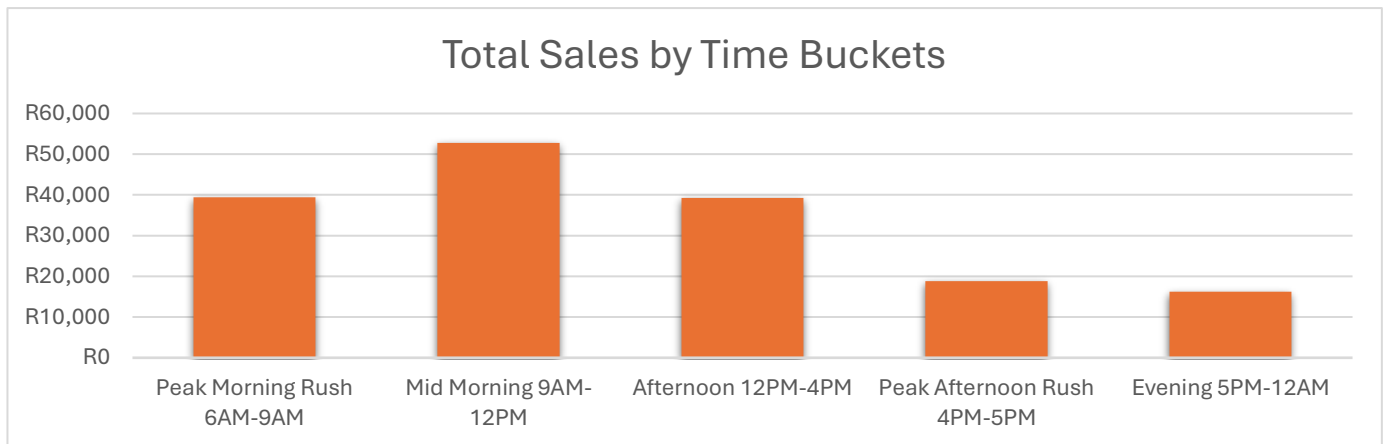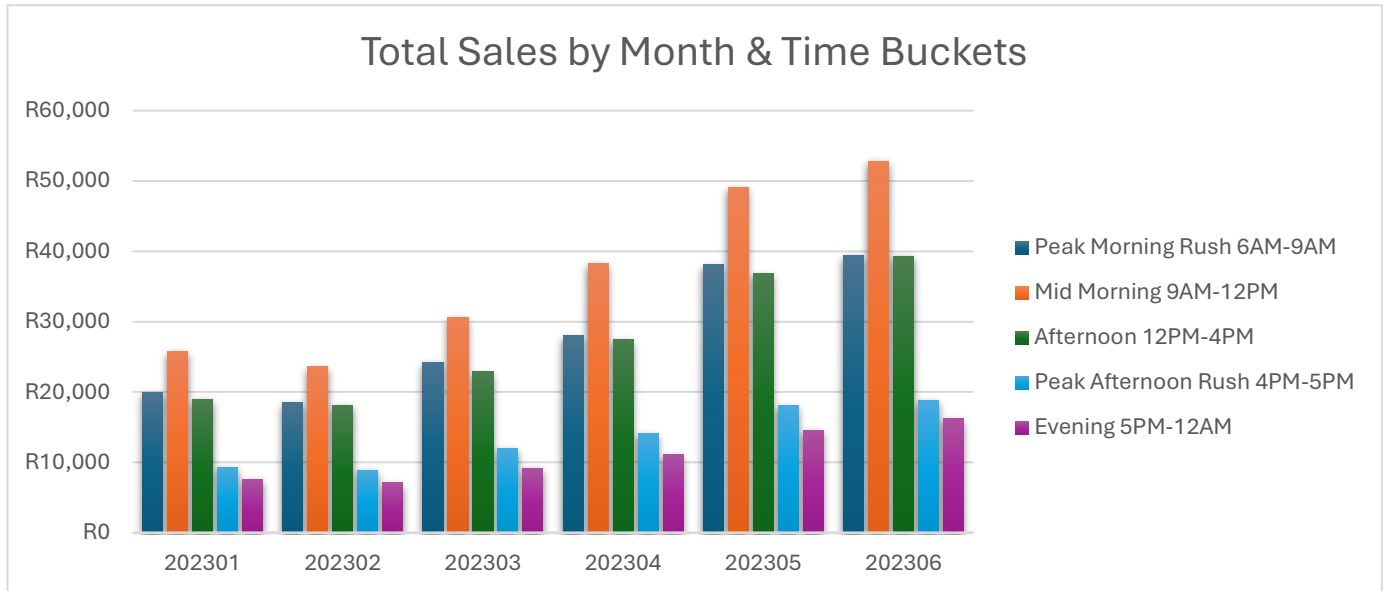
6. Total Sales vs Product Category

Total Sales by Product Category

Total Sales by Product Type