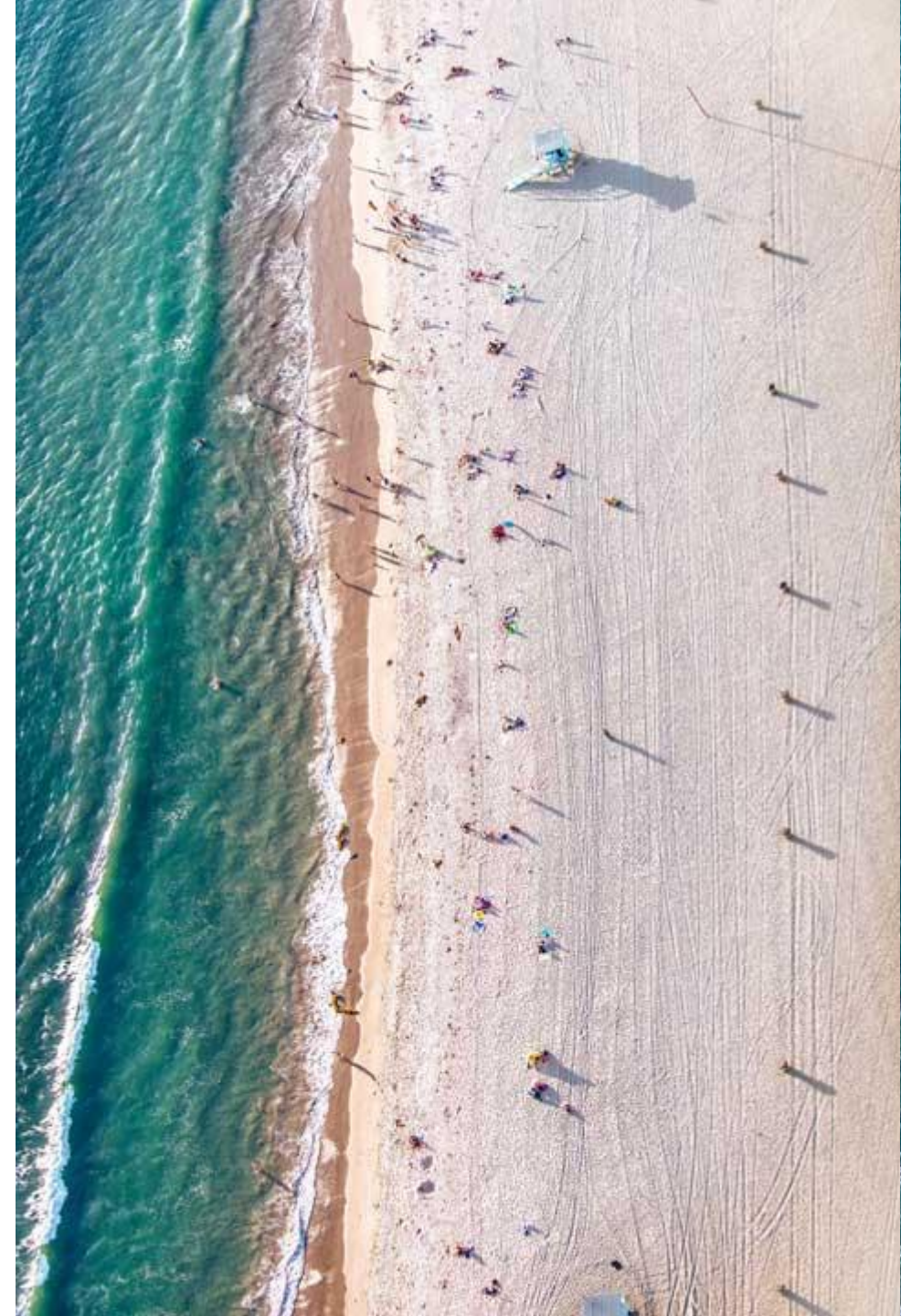June 2020

Category review: Chips

Retail Analytics

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Our 17 year history assures best practice in privacy, security and the ethical use of data

Privacy

- We have built our business based on privacy by design principles for the past 17 years
- Quantium has strict protocols around the receipt and storage of personal information
- All information is de-identified using an irreversible tokenisation process with no ability to re-identify individuals.

Security

- We are ISO27001 certified - internationally recognised for our ability to uphold best practice standards across information security
- We use 'bank grade' security to store and process our data
- Comply with 200+ security requirements from NAB, Woolworths and other data partners
- All partner data is held in separate restricted environments
- All access to partner data is limited to essential staff only
- Security environment and processes regularly audited by our data partners.

Ethical use of data

Applies to all facets of our work, from the initiatives we take on, the information we use and how our solutions impact individuals, organisations and society.

We all have a responsibility to use data for good

Quantium believes in using data for progress, with great care and responsibility. As such please respect the commercial in confidence nature of this document.

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Executive summary

(01) **Task 1**   Data Preparation and Customer Analysis

(02) **Task 2**   Experimentation and Upliftt Testing

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01

## Data Preparation and Customer Analysis

Here we first Analysis the data set Using Python

We check for any null or missing value in dataset.

Also saw the summary of data provided using Describe method in python

	DATE	STORE_NBR	LYLTY_CARD_NBR	TXN_ID	PROD_NBR
count	264836.000000	264836.00000	2.648360e+05	2.648360e+05	264836.000000
mean	43464.036260	135.08011	1.355495e+05	1.351583e+05	56.583157
std	105.389282	76.78418	8.057998e+04	7.813303e+04	32.826638
min	43282.000000	1.00000	1.000000e+03	1.000000e+00	1.000000
25%	43373.000000	70.00000	7.002100e+04	6.760150e+04	28.000000
50%	43464.000000	130.00000	1.303575e+05	1.351375e+05	56.000000
75%	43555.000000	203.00000	2.030942e+05	2.027012e+05	85.000000
max	43646.000000	272.00000	2.373711e+06	2.415841e+06	114.000000

4

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We saw the line graph between two main Index
Total Sales and Taxation Id of Customer.
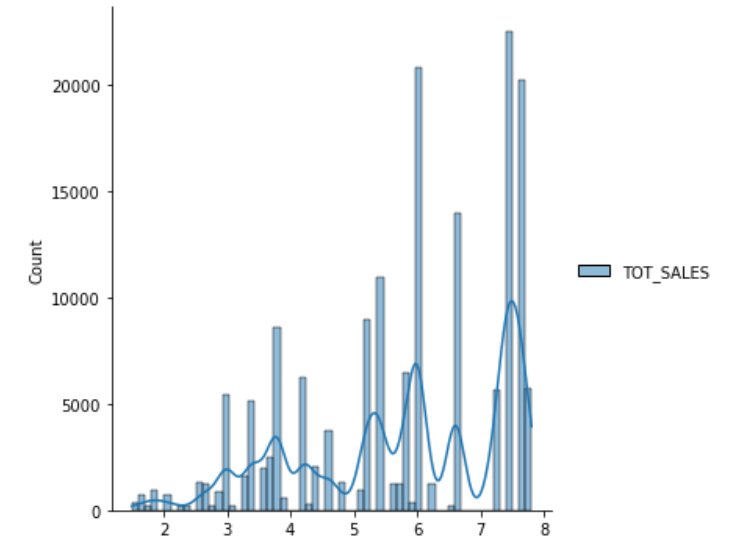
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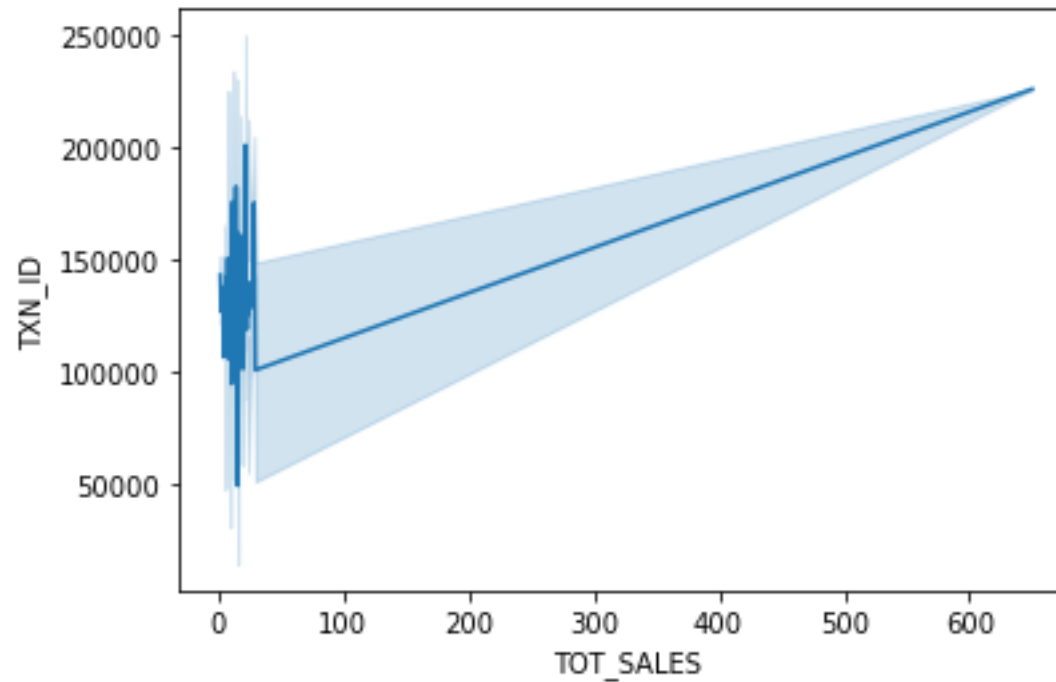
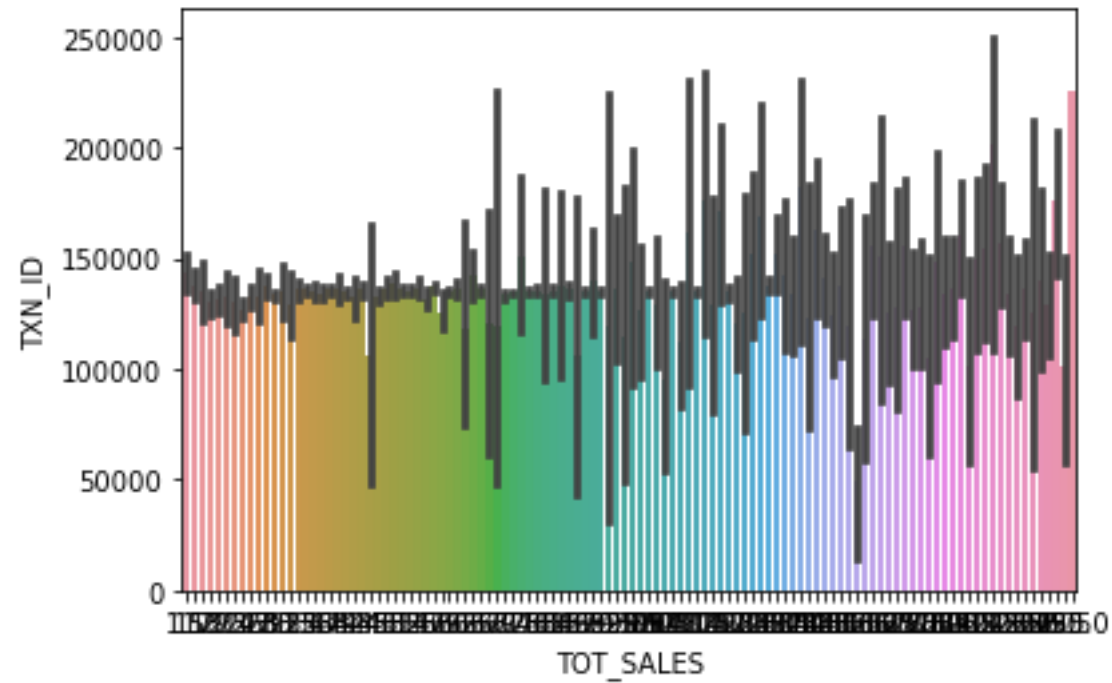# This Boxplot of dataset Vs Distplot of dataset

With Outliers
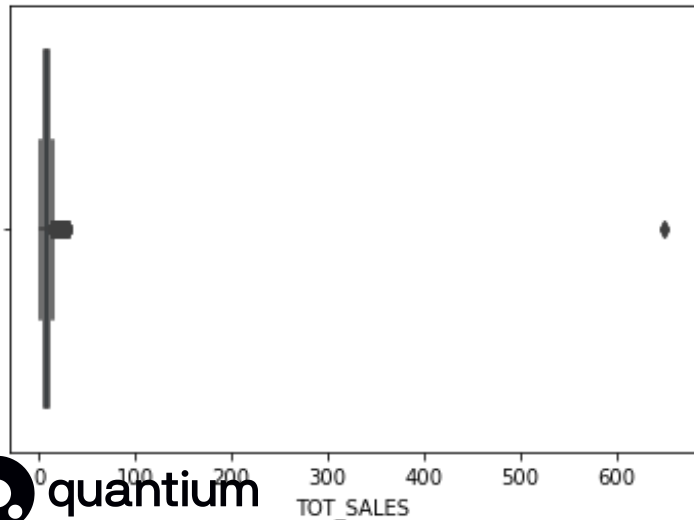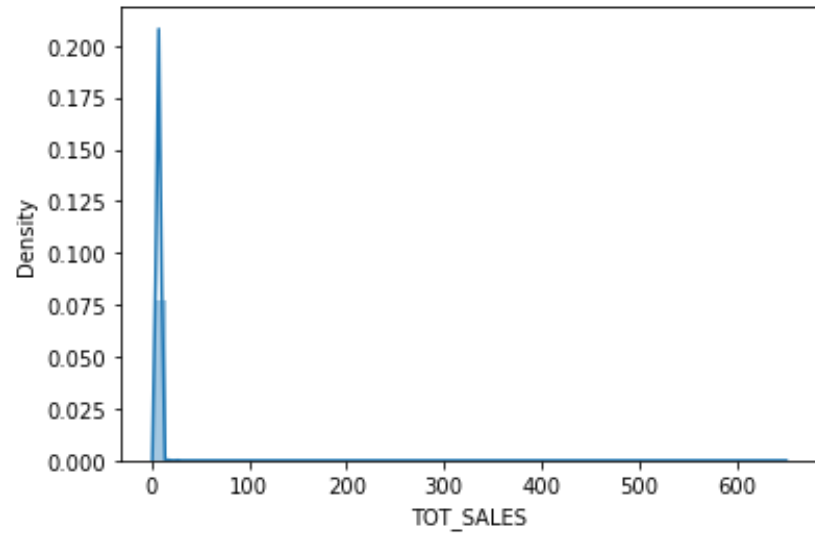
After Removing Outliers
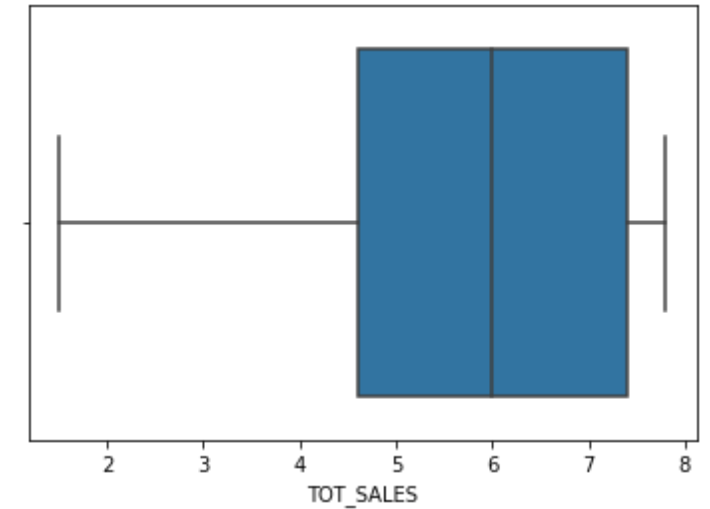
Bar plot for the dataset provided

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02

Experimentation and Uplift Testing

In this we calculated Total Sales Revenue

And Total Customer Id which is TXN_ID in this data set.

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At Last we calculated total Number of Transaction Per Customer.

```python
total_customer = max(dataset['TXN_ID'])
print(total_customer)
```

2415841

TOTAL NO. OF TRANSACTIONS PER CUSTOMER

```python
dataset.shape
```

(264834, 12)

```python
avg_trans = (total_customer)/2648340
print(avg_trans)
```

0.9122095350294902

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Thank You

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Classification: Confidential