**BAKERY SALES ANALYTICS REPORT**

**Content**

This analysis was carried out using the bakery sales dataset that belongs to “The Bread basket”, a bakery located in Edinburgh sourced from Kaggle.com.

The dataset contained the transaction details of customers who ordered different items from this bakery online, during the time period of 16/01/11 to 17/12/03.

The dataset had 20507 entries, over 9000 transactions and 5 columns.

Dataset was clean, had no duplicate records and stored in a csv file format.

**Variables**

* TransactionNo: unique identifier for every single transaction
* Items: items purchased
* DateTime: date and time stamp of the transaction
* Daypart: part of the day when a transaction is made (morning, afternoon, evening, night)

**Average monthly sales analysis**

Sales data was arranged into months (January to December) for the 2016 and 2017 time period. Average sales for both years in their respective months was calculated using the average function on excel and conditional formatting was applied to highlight months with high and low sales. A line chart was used to display the trend in the average sale for 2016 and 2017 in 12 months.

*Insights*

From the above chart, we can see that the average sales of items in the bakery is lowest in September and the highest average sales are recorded in November to March.

*Recommendation*

Increase marketing strategies for example issuing of sales coupons in September to increase sales.

Purchase more raw materials for making bakery products in November to march time period to meet the increase sale demand.

**Top selling products**

A pivot table was created using the data and filtered by year and count of the items.

The pivot table was sorted using the count items column in ascending order, displaying the top 10 selling items with the least quantity sold at the top of the table.

A picture chart was created using the pivot chart tab.

*Insights*

The top selling product from the bakery is coffee with a total of 5,471 quantities sold in 2016 and 2017. The top baked product is bread with 3,325 quantities sold in the 2-year time period.

*Recommendation*

Daily supply of raw material for coffee and bread, as well as cups and packages for bread should always be readily available at the bakery.

**Sales by Daytype Analysis**

Pivot table was created and used to filter data by the day type and quantity sold. the percentage value of quantity sold on weekdays versus quantity sold on weekend was calculated and the data displayed in a pie chart using the pivot chart option.

*Insights*

Sales are 25% increased during weekdays than in weekends.

*Recommendations*

Staffing should on schedule, with a smaller number of staff working at the bakery during the weekend.

**Total Quantity Sold by Year Analysis**

Pivot table generated with the data and filtered by count of items and year.

Pivot chart option was used to create a column chart with the data to compare the quantity sold in both years.

Percentage increase in sales between 2016 and 2017 was also calculated.

*Insights*

*21%* Increase in sales from January 2016 - December 2017.

More items were sold in 2017 than 2016 which shows growth in the sales of the bakery.

*Recommendations*

Show appreciation and encourage staff to keep up the good effort of effectively increasing sales.

**Linear Regression Analysis**

Linear regression was calculated statistically using the sale data of 2017, to predict the quantity of items sold in the coming year, 2018.

Data was arranged in a worksheet and arrange by months, January of 2017 to December of 2018.

Analysis was done by using the excel forecast function using the sales data series from 2017 and the time series including the months for 2017 and 2018.

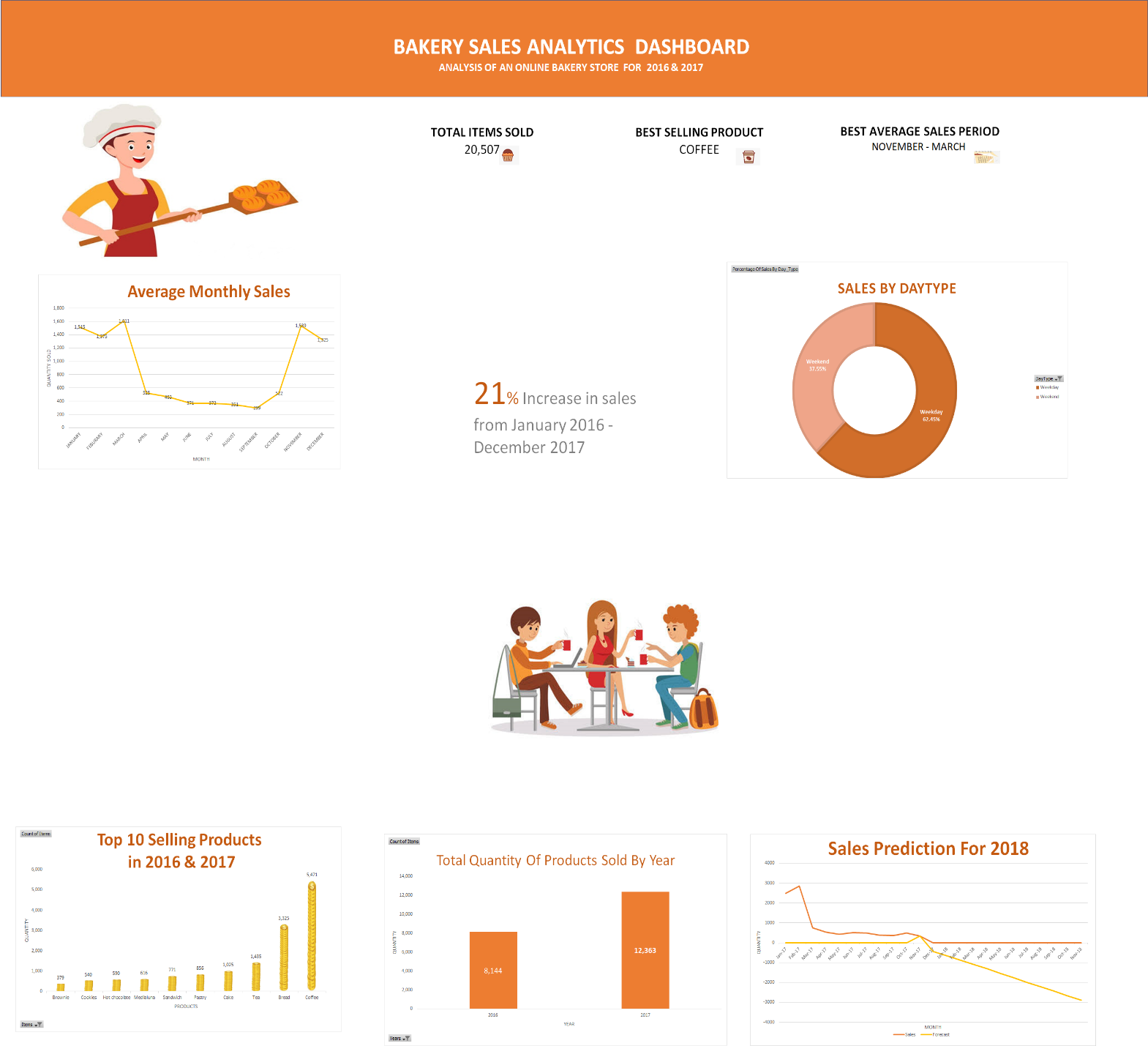
*Insights*

The linear regression chart predicts a possible decline in quantity of items sold at the bakery in the coming year 2018.

*Recommendations*

Attention should be paid to avoid a drastic decline in sales in 2018, explore more marketing strategies and cut cost of production if possible.

**Dashboard**

****