Name: Prakash Chauhan

Working capacity: Data Analyst

**Topic:** Product Sales Data

**Agenda:**

* Descriptive Statistics of Product Sales Data
* Analysis of the data
* Graphs and Chart for visualization of the data
* Dashboard

**Introduction:**

We have a dataset of product sales .In which we have the different columns and rows,the columns containing the variable and different rows are containing the observation.on the basis of the given dataset we are going to perform analysis and present the new insights from the given data set of product sales.

**Problem Statement :**

we have a data set of product sales year wise 2011,2012,2013 . we have to find in which year the sales is high or less according to the different product and product categories and sub categories.In which year the different sales is high or less according to the information given in the data set.

Depending on the different question we are going to perform the different analysis based on the given data set .According to our analysis we are going to plot different chart and plot to represent the visualization technoques.

**Purpose of the project:**

* To understand the sales pattern
* We can discover what products are preffered basis of the customer like and dislike
* Pattern of food consumption
* Future demand of the product

**Who will be impacted by this analysis:**

* **Managers**
* **Investors**
* **Suppliers**
* **Customers**

**Product Sales Data :**

In the given data set of the product sales we have the different rows and columns.The columns are consist of the different variables and rows are consists of the different observation .

Variables are:

* SKU
* Product name
* Temperature
* Product category
* Total 2011 sales
* Total2012 sales
* Total2013

Apart from that years consists of three different data set in which the year containing the data for ndiffernt month.

In the data set we have 7 columns and the 100 rows .

In the different year data set we have the 11 columns and 100 rows. The columns containing the the data for different months.

In the temperature columns we have hot,cold and neutal .

In the product categories we have beverage,food,Gambling,Drug.

Temperature columns contains the nominal categorical data.

Product Name column contains the categorical data.

Product category column contains the categorical data.

The columns of Total sales of 2011,2012 & 2013 contains the continuous numerical data.

Q.1)what is the sum of total sales for different product in 2011.

|  |  |
| --- | --- |
| **Row Labels** | **Sum of Total 2011 Sales** |
| $1 Lottery Ticket | 48238 |
| $10 Lottery Ticket | 1578 |
| $2 Lottery Ticket | 26807 |
| $20 Lottery Ticket | 1072 |
| $5 Lottery Ticket | 1782 |
| Allergy Pills | 1094 |
| Apple | 18149 |
| Apple Cookie | 30678 |
| Apple Muffin | 14521 |
| Baconburger | 16968 |
| Bagged Ice | 4561 |
| Banana | 19726 |
| BBQ Chips Bag | 31065 |
| Bottled Propane | 3007 |
| Bottled Water | 17320 |
| Bread Loaf | 23326 |
| Butterfinger Candy Bar | 20093 |
| Cappacino | 31417 |
| Cheese Bread | 14717 |
| Cheese Pizza Slice | 17039 |
| Cheese Popcorn Bag | 21545 |
| Cheeseburger | 27005 |
| Cherry Gatorade | 5064 |
| Cherry Soda | 5381 |
| Chew | 751 |
| Chicken Soup | 31887 |
| Chili | 11618 |
| Chocolate Chip Cookie | 29653 |
| Chocolate Chip Muffin | 19577 |
| Chocolate Cookie | 28663 |
| Chocolate Ice Cream Pail | 25115 |
| Chocolate Milk | 1631 |
| Chocolate Muffin | 24962 |
| Cigar | 2105 |
| Cigarettes | 11253 |
| Coffee | 21263 |
| Coke 20oz Bottle | 15684 |
| Cold Tea | 11388 |
| Cookies and Cream Ice Cream Pail | 13159 |
| Crossaint | 10519 |
| Diet Coke 20oz Bottle | 21384 |
| Diet Energy Drink | 3880 |
| Diet Pepsi 20oz Bottle | 12834 |
| Diet Sprite 20oz Bottle | 4282 |
| Egg and Bacon Sandwich | 31723 |
| Egg and Cheese Sandwich | 30643 |
| Egg and Ham Sandwich | 25887 |
| Egg and Sausage Sandwich | 28922 |
| Egg Roll | 24080 |
| Grape Gatorade | 5381 |
| Grape Soda | 4117 |
| Hamburger | 29471 |
| Hamburger Buns | 16673 |
| Hashbrowns | 13745 |
| Headache Pills | 1413 |
| Hot Dog | 21964 |
| Hot Dog Buns | 22250 |
| Hot Tea | 5861 |
| Kit Kat Candy Bar | 23402 |
| Kiwi Gatorade | 3799 |
| Kiwi Soda | 4749 |
| Lemon | 29322 |
| Lemon Cookie | 14313 |
| Lemon Gatorade | 4117 |
| Lemon Muffin | 11256 |
| Lemon Soda | 6016 |
| Lime Gatorade | 4431 |
| Lime Soda | 4117 |
| Meat Sticks | 20211 |
| Milky Way Candy Bar | 17059 |
| Mint Ice Cream Pail | 18310 |
| Mocha | 18545 |
| Nail Clipper | 591 |
| Newspaper | 14728 |
| Onion | 20723 |
| Onionburger | 25706 |
| Orange | 26508 |
| Orange Gatorade | 5064 |
| Orange Juice | 2607 |
| Orange Soda | 4431 |
| Pepperoni Pizza Slice | 18343 |
| Pepsi 20oz Bottle | 9981 |
| Plain Popcorn Bag | 20641 |
| Potato | 28192 |
| Regular Chips Bag | 29427 |
| Regular Energy Drink | 16134 |
| Sausage Pizza Slice | 13128 |
| Sherbet Ice Cream Pail | 9996 |
| Snickers Candy Bar | 19260 |
| Sprite 20oz Bottle | 7132 |
| Strawberry Gatorade | 3799 |
| Strawberry Milk | 656 |
| Strawberry Soda | 3166 |
| String Cheese | 23020 |
| Summer Sausage | 11968 |
| Tomato Soup | 28161 |
| Vanilla Ice Cream Pail | 14146 |
| Vegetable Soup | 11737 |
| Whatchamacallit Candy Bar | 26825 |
| White Milk | 4883 |
| **Grand Total** | **1546491** |

Q.2)what is the sum of total sales for different product in 2012.

|  |  |
| --- | --- |
| **Row Labels** | **Sum of Total 2012 Sales** |
| $1 Lottery Ticket | 48720 |
| $10 Lottery Ticket | 1591 |
| $2 Lottery Ticket | 27074 |
| $20 Lottery Ticket | 1082 |
| $5 Lottery Ticket | 1802 |
| Allergy Pills | 1104 |
| Apple | 18329 |
| Apple Cookie | 30987 |
| Apple Muffin | 14666 |
| Baconburger | 17135 |
| Bagged Ice | 4608 |
| Banana | 19922 |
| BBQ Chips Bag | 31376 |
| Bottled Propane | 3038 |
| Bottled Water | 17494 |
| Bread Loaf | 23560 |
| Butterfinger Candy Bar | 20295 |
| Cappacino | 31730 |
| Cheese Bread | 14865 |
| Cheese Pizza Slice | 17208 |
| Cheese Popcorn Bag | 21761 |
| Cheeseburger | 27274 |
| Cherry Gatorade | 5115 |
| Cherry Soda | 5433 |
| Chew | 759 |
| Chicken Soup | 32206 |
| Chili | 11736 |
| Chocolate Chip Cookie | 29949 |
| Chocolate Chip Muffin | 19773 |
| Chocolate Cookie | 28952 |
| Chocolate Ice Cream Pail | 25367 |
| Chocolate Milk | 1648 |
| Chocolate Muffin | 25212 |
| Cigar | 2125 |
| Cigarettes | 11365 |
| Coffee | 21474 |
| Coke 20oz Bottle | 15841 |
| Cold Tea | 11502 |
| Cookies and Cream Ice Cream Pail | 13290 |
| Crossaint | 10624 |
| Diet Coke 20oz Bottle | 21598 |
| Diet Energy Drink | 3922 |
| Diet Pepsi 20oz Bottle | 12963 |
| Diet Sprite 20oz Bottle | 4325 |
| Egg and Bacon Sandwich | 32042 |
| Egg and Cheese Sandwich | 30952 |
| Egg and Ham Sandwich | 26149 |
| Egg and Sausage Sandwich | 29211 |
| Egg Roll | 24322 |
| Grape Gatorade | 5433 |
| Grape Soda | 4159 |
| Hamburger | 29764 |
| Hamburger Buns | 16840 |
| Hashbrowns | 13885 |
| Headache Pills | 1428 |
| Hot Dog | 22183 |
| Hot Dog Buns | 22471 |
| Hot Tea | 5922 |
| Kit Kat Candy Bar | 23635 |
| Kiwi Gatorade | 3837 |
| Kiwi Soda | 4794 |
| Lemon | 29613 |
| Lemon Cookie | 14455 |
| Lemon Gatorade | 4159 |
| Lemon Muffin | 11369 |
| Lemon Soda | 6078 |
| Lime Gatorade | 4475 |
| Lime Soda | 4159 |
| Meat Sticks | 20413 |
| Milky Way Candy Bar | 17228 |
| Mint Ice Cream Pail | 18491 |
| Mocha | 18730 |
| Nail Clipper | 598 |
| Newspaper | 14874 |
| Onion | 20930 |
| Onionburger | 25962 |
| Orange | 26772 |
| Orange Gatorade | 5115 |
| Orange Juice | 2632 |
| Orange Soda | 4475 |
| Pepperoni Pizza Slice | 18528 |
| Pepsi 20oz Bottle | 10080 |
| Plain Popcorn Bag | 20846 |
| Potato | 28476 |
| Regular Chips Bag | 29723 |
| Regular Energy Drink | 16297 |
| Sausage Pizza Slice | 13258 |
| Sherbet Ice Cream Pail | 10096 |
| Snickers Candy Bar | 19452 |
| Sprite 20oz Bottle | 7205 |
| Strawberry Gatorade | 3837 |
| Strawberry Milk | 662 |
| Strawberry Soda | 3198 |
| String Cheese | 23252 |
| Summer Sausage | 12087 |
| Tomato Soup | 28441 |
| Vanilla Ice Cream Pail | 14288 |
| Vegetable Soup | 11856 |
| Whatchamacallit Candy Bar | 27093 |
| White Milk | 4931 |
| **Grand Total** | **1561961** |

Q.3)what is the total sale of different product in 2013.

|  |  |
| --- | --- |
| **Row Labels** | **Sum of Total 2013 Sales** |
| $1 Lottery Ticket | 49663 |
| $10 Lottery Ticket | 1625 |
| $2 Lottery Ticket | 27582 |
| $20 Lottery Ticket | 1100 |
| $5 Lottery Ticket | 1838 |
| Allergy Pills | 1118 |
| Apple | 18674 |
| Apple Cookie | 31707 |
| Apple Muffin | 14865 |
| Baconburger | 17492 |
| Bagged Ice | 4669 |
| Banana | 20288 |
| BBQ Chips Bag | 32026 |
| Bottled Propane | 3101 |
| Bottled Water | 17826 |
| Bread Loaf | 23916 |
| Butterfinger Candy Bar | 20646 |
| Cappacino | 32391 |
| Cheese Bread | 15085 |
| Cheese Pizza Slice | 17521 |
| Cheese Popcorn Bag | 22229 |
| Cheeseburger | 27836 |
| Cherry Gatorade | 5195 |
| Cherry Soda | 5519 |
| Chew | 776 |
| Chicken Soup | 32874 |
| Chili | 12027 |
| Chocolate Chip Cookie | 30429 |
| Chocolate Chip Muffin | 20045 |
| Chocolate Cookie | 29350 |
| Chocolate Ice Cream Pail | 25716 |
| Chocolate Milk | 1687 |
| Chocolate Muffin | 25651 |
| Cigar | 2159 |
| Cigarettes | 11579 |
| Coffee | 21931 |
| Coke 20oz Bottle | 16090 |
| Cold Tea | 11816 |
| Cookies and Cream Ice Cream Pail | 13498 |
| Crossaint | 10852 |
| Diet Coke 20oz Bottle | 21943 |
| Diet Energy Drink | 4001 |
| Diet Pepsi 20oz Bottle | 13165 |
| Diet Sprite 20oz Bottle | 4389 |
| Egg and Bacon Sandwich | 32617 |
| Egg and Cheese Sandwich | 31482 |
| Egg and Ham Sandwich | 26720 |
| Egg and Sausage Sandwich | 29737 |
| Egg Roll | 25089 |
| Grape Gatorade | 5514 |
| Grape Soda | 4231 |
| Hamburger | 30301 |
| Hamburger Buns | 17327 |
| Hashbrowns | 14156 |
| Headache Pills | 1449 |
| Hot Dog | 22906 |
| Hot Dog Buns | 22877 |
| Hot Tea | 6075 |
| Kit Kat Candy Bar | 24179 |
| Kiwi Gatorade | 3895 |
| Kiwi Soda | 4869 |
| Lemon | 30068 |
| Lemon Cookie | 14707 |
| Lemon Gatorade | 4223 |
| Lemon Muffin | 11529 |
| Lemon Soda | 6181 |
| Lime Gatorade | 4546 |
| Lime Soda | 4231 |
| Meat Sticks | 20710 |
| Milky Way Candy Bar | 17526 |
| Mint Ice Cream Pail | 18739 |
| Mocha | 19143 |
| Nail Clipper | 613 |
| Newspaper | 15183 |
| Onion | 21349 |
| Onionburger | 26527 |
| Orange | 27395 |
| Orange Gatorade | 5200 |
| Orange Juice | 2690 |
| Orange Soda | 4542 |
| Pepperoni Pizza Slice | 18850 |
| Pepsi 20oz Bottle | 10241 |
| Plain Popcorn Bag | 21450 |
| Potato | 28959 |
| Regular Chips Bag | 30342 |
| Regular Energy Drink | 16583 |
| Sausage Pizza Slice | 13509 |
| Sherbet Ice Cream Pail | 10233 |
| Snickers Candy Bar | 19905 |
| Sprite 20oz Bottle | 7323 |
| Strawberry Gatorade | 3899 |
| Strawberry Milk | 676 |
| Strawberry Soda | 3248 |
| String Cheese | 23642 |
| Summer Sausage | 12297 |
| Tomato Soup | 29129 |
| Vanilla Ice Cream Pail | 14475 |
| Vegetable Soup | 12161 |
| Whatchamacallit Candy Bar | 27692 |
| White Milk | 5052 |
| **Grand Total** | **1592082** |

Q.4)what is the sum of total sales of different product category in 2011.

|  |  |
| --- | --- |
| **Row Labels** | **Sum of Total 2011 Sales** |
| Beverage | 275075 |
| Drug | 16616 |
| Food | 1156997 |
| Gambling | 79477 |
| Hygeine | 591 |
| Leisure | 17735 |
| **Grand Total** | **1546491** |

Q.5)what is the sum of total sales of different product category in 2012.

|  |  |
| --- | --- |
| **Row Labels** | **Sum of Total 2012 Sales** |
| Beverage | 277831 |
| Drug | 16781 |
| Food | 1168570 |
| Gambling | 80269 |
| Hygeine | 598 |
| Leisure | 17912 |
| **Grand Total** | **1561961** |

Q.6)what is the sum of total sales of different product category in 2013.

|  |  |
| --- | --- |
| **Row Labels** | **Sum of Total 2013 Sales** |
| Beverage | 282984 |
| Drug | 17081 |
| Food | 1191312 |
| Gambling | 81808 |
| Hygeine | 613 |
| Leisure | 18284 |
| **Grand Total** | **1592082** |

**Outputs:**

* In year 2013 the sum of total sales of the product is more.
* In year 2011 the sum of total sale of the product is less.
* Food have more sale as compared to the different product categories in the year 2011, 2012 & 2013.
* Hygeine ,product categories have less sale in all three years 2011,2012 & 2013 .

**DASHBOARD:**

  