**Sales Data Analysis**

* Sales dataset has below data.
* Product Name
* Temperature
* Product Category
* Sales amount for three years.
* Given Dataset has 101 rows and 7 columns.
* Total sales we are analysing is for 3 years.
* Given dataset contains total 6 products and 100 products based on product categories.
* Below is the Descriptive Analysis for three years.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Total 2011 Sales** |  | **Total 2012 Sales** |  | **Total 2013 Sales** |  |
|  |  |  |  |  |  |
| Mean | 15464.91 | Mean | 15619.61 | Mean | 15920.82 |
| Standard Error | 1027.626 | Standard Error | 1037.900743 | Standard Error | 1058.568 |
| Median | 15206 | Median | 15357.5 | Median | 15636.5 |
| Mode | 4117 | Mode | 4159 | Mode | 4231 |
| Standard Deviation | 10276.26 | Standard Deviation | 10379.00743 | Standard Deviation | 10585.68 |
| Sample Variance | 1.06E+08 | Sample Variance | 107723795.3 | Sample Variance | 1.12E+08 |
| Kurtosis | -0.521543 | Kurtosis | -0.521535349 | Kurtosis | -0.5253 |
| Skewness | 0.317674 | Skewness | 0.317699814 | Skewness | 0.317405 |
| Range | 47647 | Range | 48122 | Range | 49050 |
| Minimum | 591 | Minimum | 598 | Minimum | 613 |
| Maximum | 48238 | Maximum | 48720 | Maximum | 49663 |
| Sum | 1546491 | Sum | 1561961 | Sum | 1592082 |
| Count | 100 | Count | 100 | Count | 100 |
| Confidence Level(95.0%) | 2039.033 | Confidence Level(95.0%) | 2059.420249 | Confidence Level(95.0%) | 2100.428 |

**Below are the findings from the sales Dataset given:**

* Maximum sale product category is Food and minimum sale category is Hygiene.
* Average salary by each year is 15465 for year-2011, 45620 for year-2012 and 15921 for year-2013.
* The sale is increasing by each year.
* October month has the bigger sales in all the years.
* Below table shows the sum of total sales per year.

|  |  |  |  |
| --- | --- | --- | --- |
| **Product Categories** | **Sum of Total 2011 Sales** | **Sum of Total 2012 Sales** | **Sum of Total 2013 Sales** |
| Beverage | 498586 | 503562 | 512816 |
| Drug | 68382 | 69062 | 70452 |
| Food | 855895 | 864474 | 881196 |
| Gambling | 83266 | 84100 | 86139 |
| Hygiene | 3799 | 3837 | 3895 |
| Leisure | 36563 | 36926 | 37584 |
| **Grand Total** | **1546491** | **1561961** | **1592082** |

* Max of total sales per year.

|  |  |  |  |
| --- | --- | --- | --- |
| **Product Categories** | **Max of Total 2011 Sales** | **Max of Total 2012 Sales** | **Max of Total 2013 Sales** |
| Beverage | 48238 | 48720 | 49663 |
| Drug | 23402 | 23635 | 24179 |
| Food | 31887 | 32206 | 32874 |
| Gambling | 29471 | 29764 | 30301 |
| Hygiene | 3799 | 3837 | 3895 |
| Leisure | 22250 | 22471 | 22877 |
| **Grand Total** | **48238** | **48720** | **49663** |