Module 4: Introduction to Numpy, Pandas, and Matplotlib

Case Study – 4

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Domain – Retail

focus – Visualize the sales data

Business challenge/requirement
BigMart is one of the biggest retailers in Europe and has operations across multiple countries. You are a data analyst in the IT team of BigMart. Invoice and SKU-wise Sales Data for the Year 2011 are shared with you. You need to prepare meaningful charts to showcase the various sales trends for 2011 to top management.

Key issues
Data should be displayed pictorially to capture the attention of top management

Considerations
NONE

Data volume
- Approx 500K records – file BigMartSalesData.csv

Additional information
- NA

Business benefits
This exercise is an annual exercise and BigMart makes an important investment decisions based on trends

Approach to Solve
You have to use the fundamentals of Matplotlib covered in module 5 and plot the following 4 charts/graph

1. Plot Total Sales Per Month for the Year 2011. How the total sales have increased over months in the Year 2011. Which month has the lowest Sales?
2. Plot Total Sales Per Month for the Year 2011 as Bar Chart. Is Bar Chart Better to visualize than a Simple Plot?
3. Plot Pie Chart for the Year 2011 Country Wise. Which Country contributes the highest towards sales?

4. Plot Scatter Plot for the invoice amounts and see the concentration of the amount. In which range most of the invoice amounts are concentrated

Enhancements for code
You can try these enhancements in code

1. Change the bar chart to show the value of the bar
2. In Pie Chart Play With Parameters shadow=True, startangle=90, and see how different the chart looks
3. In scatter plot change the color of Scatter Points