Retail Analytics: Project outline

By Minal Singh, Priyanka Phalake, Soumya Tejas University at Buffalo, The State University of New York

We are looking at sales and customer data for a retail-clothing store. The business is interested in particular information, which we will enable by the design and development of this data warehouse.

The two primary areas we are focusing on are:

- Sales Analysis
 Assessing point of sales data and product information, comparing it with past performance, and predicting sales forecast
- Customer Satisfaction
 Gaining an insight into customer segments, analyzing retained customers

The exact information that the business is interested in:

- i. Overall sales compared to previous fiscal year
- ii. Sales by gender compared to previous fiscal year
- iii. Profit generated for each store compared to previous fiscal year
- iv. Overall sales and profit for each customer
- v. Top ten and bottom ten products by sales purchased by the customers
- vi. Top promotions employed by the customers during purchase
- vii. Customer satisfaction
- viii. Number of returns of merchandize.
- ix. Product sales amount by zip code.
- x. Highest sales amount in a zip code.

We have addressed all of these questions based on analysis and implementation of the BI tool, Tableau.

Key Performance Indicator (KPI) Metrics:

Some of the KPIs that we are looking at are:

SALES ANALYSIS	
Gross Sales	Gross sales are the grand total of all sale transactions reported in a period
Profit	The difference between sales and the cost of goods sold
Profit Margin Ratio	It is a profitability ratio that measures the amount of net income earned
	with each dollar of sales generated
Average purchase value	Measure the average volume of sales through the number of purchases
	multiplied by the average amount of a single purchase.
CUSTOMER ANALYSIS	
Customer Lifetime Value	It is the prediction of the net profit attributed to the entire future
	relationship with a customer.
Customer Retention	Percentage of customers the company retains over a given period of time