

Analyze the Sales Report of a Clothes Manufacturing Outlet

Business Analytic Foundation with R Tools- Question



Question

A high-end fashion retail store is looking to expand its products. It wants to understand the market and find the current trends in the industry. It has a database of all products with attributes, such as, style, material, season, and the sales of the products over a period of two months. There are two files provided, and the detailed description of each is given below:

Attribute DataSet.csv

- Dress_ID : A unique identifier for each dress
- Style : Style of dress, can belong to one of 12 styles, including casuals, novelty, etc.
- Price : Price category of the dress (low, average, medium, high, and very high)
- Rating : A number between 0 and 5, specifying the rating of the dress
- Size : Size of the dress (small, medium, large, XL, and free)
- Season : Season category of the dress, i.e., summer, spring, etc.
- NeckLine : Type of neckline, for example, V-neck, collar, etc.
- Sleeve length : Length of the sleeve—full, three-quarters, etc.
- Waistline : Waistline of the dress
- Material : Material of the dress, for example, silk, cotton, etc.
- Fabric type : Fabric type of the dress
- Decoration : Decoration of dress, like ruffles, embroidery, etc.
- Pattern Type : Pattern type of the dress—dot, animal print, etc.
- Recommendation: A binary value suggesting a recommendation (1) or not (0)

Dress Sales.xlsx

Dress_ID : A unique identifier for each dress

The remaining columns depict the sales for each dress on a particular date.

Date ranges from 29/8/2013 to 12/10/2013, and the sales are registered for alternative days.

To complete this project, you will require a strong understanding of the following concepts:

- Lesson 3—ANOVA and Correlation
- Lesson 4—Linear Regression, Logistic Regression, and Time Series Analysis

The goals of this project are:

- To automate the process of recommendations, the store needs to analyze the given attributes of the product, like style, season, etc., and come up with a model to predict the recommendation of products (in binary output – 0 or 1) accordingly.
- In order to stock the inventory, the store wants to analyze the sales data and predict the trend of total sales for each dress for an extended period of three more alternative days.
- To decide the pricing for various upcoming clothes, they wish to find how the style, season, and material affect the sales of a dress and if the style of the dress is more influential than its price.
- Also, to increase the sales, the management wants to analyze the attributes of dresses and find which are the leading factors affecting the sale of a dress.
- To regularize the rating procedure and find its efficiency, the store wants to find if the rating of the dress affects the total sales.

The data can be downloaded from the URL mentioned below (under the Data Folder link):

http://archive.ics.uci.edu/ml/datasets/Dresses_Attribute_Sales

The total time provided to complete this task is 4 hours.