**Business Analytics with Excel Certification Training**

Course-End Project Problem Statement

**Predicting restaurant tips using predictive analytics on Excel**

**Project Agenda:** Use excel to predict restaurant tips.

**Description:**

The dataset in file ***Restaurant tips dataset.xlsx*** contains tips data for different customers. The following are the features in the dataset:

|  |  |
| --- | --- |
| sex | Gender of the customer |
| smoker | Indicates if the customer is a smoker or not |
| day | Day of the restaurant visit |
| time | Indicates whether the tip was for lunch or dinner |
| size | Number of members dining |
| total bill | Bill amount in USD |
| tip | Tip amount in USD |

The following project tasks are required to be performed in excel:

* Use the restaurant tips file for the analytics using Excel
* Find out if there are any missing values and clean the data
* Find the features that are independent and dependent
* Identify which predictive problem is needed.
* Encode the categorical variables to numeric values using IF conditions
* Build an appropriate model with the dataset.
* Calculate the predicted and actual tips values.
* Calculate the RMSE(Root Mean Square Error) of the model. RMSE is root of mean of square errors.

**Tools required:** Microsoft Excel, Data Analysis Add-in.

**Expected Deliverables:** Model to predict restaurant tips given input values with the mathematical equation for predicting the tips value.