**Scoring guide (Rubric) - Classification and Hypothesis TestingEvaluated**

| **Criteria** | **Ratings** | **Points** |
| --- | --- | --- |
| **Exploratory Data Analysis**  - Problem definition - Univariate analysis - Bivariate analysis - Provide comments on the visualization such as range of attributes, outliers of various attributes. - Provide comments on the distribution of the variables - Use appropriate visualizations to identify the patterns and insights - Key meaningful observations on individual variables and the relationship between variables | Problem definition is clearly mentioned, both univariate and bivariate analysis is performed. Comments are clearly mentioned for all the plots, outliers arre also clearly observed. comments about distribution of variables is also clearly mentioned. Appropriate visualizations are used to find patterns, observations about relationship between different features is also clearly mentioned | 6/6 |
| **Data pre-processing**  Prepare the data for modelling: - Dropping insignificant variables with comments - Missing value Treatment (if needed) with comments - Outlier Detection(treat, if needed) with comments - Feature Engineering (if possible) with comments - Data split | Data preprocessing is clearly done by dropping insignificant features and the comments are also clearly mentioned regarding the same, outlier detection is also correectly performed with well written comments, other feature engineering steps like splitting of data and scaling is also correctly done | 4/4 |
| **Model building - Decision Tree**  - Build the model and comment on the model performance. - Comment on model performance | Decision Tree model is correctly built and the comments are written well | 5/5 |
| **Model Performance evaluation and improvement**  - Tune the model hyperparameters using GridSearchCV - Evaluate the model on appropriate metric - Comment on model performance - Check the Feature Importance and comment on important features | Model evaluation is correctly performed. Confusion matrix and classification report are correctly shown. Hyperparameter tuning is also correctly performed and the tuned models is also evaluated correctly and the decision tree is also observed, feature importance is also shown clearly | 5/5 |
| **Model building - Random Forest**  - Build the model and comment on the model performance. - Comment on model performance | Random Forest model is correctly built and the comments are written well | 5/5 |
| **Model Performance evaluation and improvement**  - Tune the model hyperparameters using GridSearchCV - Evaluate the model on appropriate metric - Comment on model performance - Check the Feature Importance and comment on important features | Model is also evaluated correctly with required metrics and pruning is also correctly performed | 5/5 |
| **Actionable Insights & Recommendations**  - Conclude with the key takeaways in form of important features identified. - Provide Recommendations such that the business can take action upon them. | Areas Performed well: 1) Good job on providing actionable insights and recommendations Insights are elaborative as required | 5/5 |
| **Presentation - Overall quality/ Notebook - Overall**  Low Code (Business Presentation): - Structure and flow - Crispness - Visual appeal Full Code: - Structure and flow - Well commented code | Overall the notebook is good with well written comments and observations | 5/5 |
|  | Points | 40/40 |