| Section | Description | Points | Grade Breakdown and Requirements | | | Weightage |
|---|---|---|---|---|---|---|
| | | | What 80-100% looks like | What 60-80% looks like | What <60% looks like | |
| **Define the problem and perform Exploratory Data Analysis** | - Problem definition<br>- Check shape, Data types, statistical summary<br>- Univariate analysis<br>- Multivariate analysis<br>- Use appropriate visualizations to identify the patterns and insights<br>- Key meaningful observations on individual variables and the relationship between variablesa | **8** | - Problem definition [0.5]<br>- Check shape, Data types, statistical summary [0.5]<br>- Use appropriate visualizations to identify the patterns and insights<br>- Univariate Analysis [2]<br>- Multivariate Analysis [4]<br>- Key meaningful observations on individual variables and the relationship between variables [1] | - Problem definition<br>- Check shape, Data types<br>- Use appropriate visualizations to identify the patterns and insights<br>- Univariate Analysis done for some variables but not all<br>- Multivariate Analysis done for 2-3 combination of variables<br>- Few observations listed | - Problem definition<br>- Univariate and Analysis done for some variables | 13.33% |
| **Data Pre-processing** | Prepare the data for modelling:<br>- Outlier Detection(treat, if needed)<br>- Feature Engineering/drop redundant features (if needed)<br>- Encode the data<br>- Data split | **4** | Prepare the data for modelling:<br>- Outlier Detection(treat, if needed) [1]<br>- Drop redundant variables [1]<br>- Encode the data [1]<br>- Data split [1] | - Missing value Treatment<br>- Encode the data<br>- Train and Test Data split | - Encode the data<br>- Train and Test Data split | 6.67% |
| **Model Building - Logistic Regression** | - Build a Logistic Regression model<br>- Check the performance of the models across train and test set using different metrics | **4** | - Build a Logistic Regression model [2]<br>- Check the performance of the model across train and test set using different metrics [2] | - Build a Logistic Regression model<br>- Check the performance of the models | - Build a Logistic Regression model | 6.67% |
| **Model Performance Improvement - Logistic Regression** | - Try and improve the model performance by tuning the model (minimum 2 paratmeters to be tuned)<br>- Comment on model performance after tuning the model<br>- Provide interpretations based on coefficients obtained from the tuned model | **5** | - Try and improve the model performance by tuning the model (minimum 2 paratmeters to be tuned) [3]<br>- Comment on model performance after tuning the model [1]<br>- Provide interpretations based on coefficients obtained from the tuned model [1] | - Try and improve the model performance by tuning the model<br>- Comment on model performance after tuning the model | - Try and improve the model performance by tuning the model | 8.33% |
| **Model Building - Linear Discriminant Analysis** | - Build a Linear Discriminant Analysis model<br>- Check the performance of the models across train and test set using different metrics | **4** | - Build a Linear Discriminant Analysis model [2]<br>- Check the performance of the model across train and test set using different metrics [2] | - Build a Linear Discriminant Analysis model<br>- Check the performance of the model | - Build a Linear Discriminant Analysis model | 6.67% |
| **Model Performance Improvement - Linear Discriminant Analysis** | - Try and improve the model performance by tuning the model<br>- Comment on model performance after tuning the model<br>- Provide interpretations based on coefficients obtained from the tuned model | **5** | - Try and improve the model performance by tuning the model [3]<br>- Comment on model performance after tuning the model [1]<br>- Provide interpretations based on coefficients obtained from the tuned model [1] | - Try and improve the model performance by tuning the model<br>- Comment on model performance after tuning the model | - Try and improve the model performance by tuning the model | 8.33% |
| **Model Building - CART** | - Build a CART model<br>- Check the performance of the models across train and test set using different metrics | **4** | - Build a CART model [2]<br>- Check the performance of the model across train and test set using different metrics [2] | - Build a CART model<br>- Check the performance of the model | - Build a CART model | 6.67% |
| **Model Performance Improvement - CART** | - Try and improve the model performance by pruning<br>- Comment on model performance<br>- Provide interpretations based on important features obtained from the model | **5** | - Try and improve the model performance by pruning [3]<br>- Comment on model performance [1]<br>- Provide interpretations based on important features obtained from the model [1] | - Try and improve the model performance by pruning<br>- Comment on model performance | - Try and improve the model performance by pruning | 8.33% |
| **Actionable Insights & Recommendations** | - Compare all the models and choose the best model with proper rationale<br>- Conclude with the key takeaways (actionable insights and recommendations) for the business | **6** | - Compare all the models and choose the best model with proper rationale [2]<br>- Conclude with the key takeaways (actionable insights and recommendations) for the business<br>- Actionable insights [1 x 2]<br>- Recommendations [0.5 x 2] | - Comment on the importance of features based on the best model<br>- Some actionable insights and recommendations mentioned | - Some actionable insights mentioned | 10.00% |
| **Business Report Quality** | - Adhere to the business report checklist | **6** | Objective, guidance, and data description: 1 point<br>Exclusion of code: 2 points<br>Structure and readability: 1 point<br>Rationale and logic: 1 point<br>Visual clarity and referencing: 1 point | Objective, guidance, and data description<br>Structure and readability<br>Rationale and logic | Objective, guidance, and data description<br>Rationale and logic | 10.00% |
| **Guided Project Deduction** | | **9** | Zero marks should be awarded in this section always as this is a deduction | | | 15.00% |
| | | **60** | | | | |