**Scoring Rubric – Programming Assessment 5 – Neural Networks**

**Criterion Name:** *Part 1: Feature Extraction*

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| **Point Value** | **Option Name** | **Description Explanation** |
| ***2*** | *Weak* | Task is incomplete/code has not been written/cell has not been run/code contains errors. |
| ***7*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. |
| ***15*** | *Strong* | 2 vectors have been printed and they look like the sample vector shown in question. The train and test data size has been printed and the shapes are as given (slight variation i.e., +-10 in values is acceptable): x train shape (24000, 13), x test shape (6000, 13), y train shape (1, 24000), y test shape (1, 6000). |

**Criterion Name:** *Part 2, Task 2.1: NN Implementation – Scikit-learn*

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| **Point Value** | **Option Name** | **Description Explanation** |
| ***4*** | *Weak* | Task is incomplete/code has not been written/cell has not been run/code contains errors. |
| ***10*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. I.e., the performance metrics (accuracy and f1) are lower than the threshold required by the question. |
| ***20*** | *Strong* | Training has been done and the model has been run on the test set and accuracy, recall, precision, F1 score, and confusion matrix have been displayed and accuracy value meets the threshold required by the question. |

**Criterion Name:** *Part 2, Task 2.2: NN Implementation – Tensorflow Keras*

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| **Point Value** | **Option Name** | **Description Explanation** |
| ***4*** | *Weak* | Task is incomplete/code has not been written/cell has not been run/code contains errors. |
| ***15*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. I.e., the performance metrics (accuracy and f1) are lower than the threshold required by the question. |
| ***30*** | *Strong* | Training has been done and the model has been run on the test set and accuracy, recall, precision, F1 score, and confusion matrix have been displayed and accuracy value meets the threshold required by the question. |

**Criterion Name:** *Part 2, Task 2.3: NN Implementation – Pytorch*

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| **Point Value** | **Option Name** | **Description Explanation** |
| ***5*** | *Weak* | Task is incomplete/code has not been written/cell has not been run/code contains errors. |
| ***22*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. I.e., the performance metrics (accuracy and f1) are lower than the threshold required by the question. |
| ***35*** | *Strong* | Training has been done and the model has been run on the test set and accuracy, recall, precision, F1 score, and confusion matrix have been displayed and accuracy value meets the threshold required by the question. |