**Scoring Rubric – Programming Assessment 4 – Logistic Regression**

**Criterion Name:** *Part 1, Task 1.1: Dataset*

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| **Point Value** | **Option Name** | **Description Explanation** |
| ***1*** | *Weak* | Task is incomplete/code has not been written/cell has not been run/code contains errors. |
| ***3*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. |
| ***5*** | *Strong* | 2 or more images have been printed out from the dataset. |

**Criterion Name:** *Part 1, Task 1.2: Data Preprocessing*

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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. |
| ***5*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. |
| ***10*** | *Strong* | 2 or more images have been printed as arrays and their values have been reduced in magnitude. |

**Criterion Name:** *Part 1, Task 1.3: Splitting the Dataset*

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| **Point Value** | **Option Name** | **Description Explanation** |
| ***1*** | *Weak* | Task is incomplete/code has not been written/cell has not been run/code contains errors. |
| ***3*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. |
| ***5*** | *Strong* | The size of training and test data is correct i.e. training data contains 50000 images and test data contains 10000 images. |

**Criterion Name:** *Part 1, Task 1.4: Create Naive Bayes Classifier*

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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. |
| ***20*** | *Strong* | All 4 requirements of the task have been implemented correctly. |

**Criterion Name:** *Part 1, Task 1.5: Implement Evaluation Functions*

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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. |
| ***5*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. |
| ***10*** | *Strong* | The 3 requirements have been coded and the results are correctly displayed with an accuracy of greater than 80%. |

**Criterion Name:** *Part 1, Task 1.6: Cross Validation*

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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* | Cross-validation has been implemented and the relevant graphs have been plotted. |

**Criterion Name:** *Part 1, Task 1.7: Classification*

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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* | The implemented model is applied to the testing data and the reported accuracy is greater than the minimum threshold stated. |

**Criterion Name:** *Part 2: Logistic Regression Using 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. |
| ***12*** | *Satisfactory* | Task has been attempted, the code has been written and the cell has been run; however, the implementation is not fully correct. |
| ***25*** | *Strong* | The accuracy score, classification reports and confusion matrix are shown and values for accuracy and F1 are similar (+-5%) to those obtained in Part 1 Task 7. |