

|   | D  | C  | B   | A  |
|---|--|--|---|--|
| Data Cleaning, Analysis and Feature Selection<br><b>0 – 2: Not very well done [Grades D or C]</b><br><b>3 – 4: OK [Grades B or A]</b> | Missing data removed.  | Missing data imputed (only applicable if less than 30% of instances are missing)   | Feature selection done and justification provided in notebook   | Imputation based on interacting features and/or distribution of data within feature  |
| Model(s) / Technique(s) / Ensemble(s)<br><b>0 – 2: Not very well done [Grades D or C]</b><br><b>3 – 4: OK [Grades B or A]</b>         | Only one model tried. No explanation why it was chosen. Student has not shown evidence of putting in any thought / effort into model selection | Two Models / Techniques listed with no explanation of why these were chosen. Models work but results not compared against each other | At least one ensemble consisting of two or more models tried. Results of each model compared against each other.                      | Two or more ensembles tried. Graphs showing how results differ by changing composition of ensembles or voting methods shown. |
| Hyperparameters Tried<br><b>0 – 2: Not very well done [Grades D or C]</b><br><b>3 – 4: OK [Grades B or A]</b>                         | No hyperparameters tried. Default values chosen  | Two hyperparameters chosen for per model, but no analysis of which hyperparameter works better                                       | Multiple hyperparameters chosen. Results of differences in results compared   | Differences of results due to hyperparameters analysed with graphs.  |
| Training, Validation, Testing<br><b>0 – 2: Not very well done [Grades D or C]</b><br><b>3 – 4: OK [Grades B or A]</b>                 | No mention of difference between training and testing split of data. No demonstration of how split was done.                                   | One training /validation/testing split. No other values tested   | Multiple training/validation/testing splits experimented, and results shown, but no analysis of how splits affects results            | Analysis of how training/validation/testing splits affect results.   |
| Evaluation and Conclusion<br><b>0 – 2: Not very well done [Grades D or C]</b><br><b>3 – 4: OK [Grades B or A]</b>                     | Simple accuracy tested; no other metric considered   | Average class accuracy for multiple classes shown  | Precision, recall and F1 metric (or SSE / MSE / RMSE / MAE, depending on what the student has decided to do) calculated for one model | Evaluation metrics for all models compared and best model(s) identified  |