MATH 4995 Peer Evaluation
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Group 6: Machine learning for Survival Prediction of Passengers on the Titanic(Tse Justin Chung Heng)

a. Summary of the report

The sinking of the Titanic is one of the most infamous shipwrecks in history. In this Kaggle project, Group 6 was asked to build a predictive model that answers the question, “what sorts of people are more likely to survive?” using passenger data. The goal of this project is to explore how the model selection and regularization method works in classification problems. More specifically, Group 6 focused on using a logistic regression model combined with various model selection methods, information criteria and regularization method.

b. Describe the strengths of the report

Group 6 defined clear approaches in the flow of his project. He selected 2 methods/ models for each model-based approach and regularization approach. For model-based approach, this group went for AIC and BIC in logistic regression for binary classification. For the regularization approach, he made use of ridge and Lasso regression with CV. He also did a comprehensive comparison across these four approaches in terms of the number of parameters, parameters and model accuracy. It was also great that group 6 recalled what we have learnt in ISLR chapter 6 during the lab sessions.

c. Describe the weaknesses of the report

After choosing the prediction model, this group did not attempt to improve the accuracy by tuning the hyperparameter in the models. I believe parameter-tuning is crucial if one wants to achieve the highest prediction accuracy.

Also, there is not much conclusion drawn from using different models for prediction. It would be better if this group includes why and how the models behave differently and result in similar accuracy based on their algorithms.

d. Evaluation on quality of writing (1-5): 4
   Is the report clearly written? Is there a good use of examples and figures? Is it well organized? Are there problems with style and grammar? Are there issues with typos, formatting, references, etc.? Please make suggestions to improve the clarity of the paper, and provide details of typos.

e. Evaluation on presentation (1-5): 4

Is the presentation clear and well organized? Are the language flow fluent and persuasive? Are the slides clear and well elaborated? Please make suggestions to improve the presentation.

f. Evaluation on creativity (1-5): 3
Does the work propose any genuinely new ideas? Is this a work that you are eager to read and cite? Does it contain some state-of-the-art results? As a reviewer you should try to assess whether the ideas are truly new and creative. Novel combinations, adaptations or extensions of existing ideas are also valuable.

g. Confidence on your assessment (1-3): 3
(3- I have carefully read the paper and checked the results, 2- I just browse the paper without checking the details, 1- My assessment can be wrong)