

Individual Assignment 5

MSCI 718

*Instructions: Complete this assignment individually and submit online to the LEARN Dropbox as a **PDF (max 2 pages)**. Also upload any source files, for example, and any .R or .Rmd files that you used. If you discussed problems with other students, please describe the nature of that discussion (e.g., on Team, in a study group). Remember, you can discuss approaches to problems with other people, but **the work you submit must be your own**.*

Learning Objectives: In this assignment, you will perform a logistic regression on the provided data set, or with permission, a data set proposed by you. You will estimate the coefficients and assess the accuracy of coefficient estimates. Finally, you will need to assess and describe the accuracy of your model.

For your report, include the following sections:

1. Problem statement and data used: You are training to become a sommelier. You'd like to really understand the difference between white and red wine. Of course, being a data analyst, your tool of choice is a regression model. Use logistic regression to predict whether a wine is red or white based on one or more other features in this data set: <https://archive.ics.uci.edu/ml/datasets/Wine+Quality>
2. Planning: Plan your analysis based on the problem statement. Include data wrangling, assumption tests, and any other analyses you may need to conduct.
3. Analysis: Conduct an appropriate regression, along with any appropriate assumption and accuracy checks.
4. Conclusion: Write up your analyses in a report to your manager and explain your conclusions.

Grading Criteria

You will be graded against the same rubric that was used for pair assignments 1 and 2. We will be looking for a number of things:

1. Process and clarity of thought: Did you clearly apply a step by step process? Why did you chose the steps you did? Did you miss out on anything? Some examples would be ensuring you wrangled your data appropriately, checked the data against any assumptions required for the analysis, and did not do any work that was not required for this specific test.
2. Presentation: Use bullets, subtitles, and the APA style for your report. Use simple language, do not use complicated words unless they help you describe a complex idea. Use graphs judiciously. Show your work - if you do not include something in the main report, the teaching staff will not grade it.