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Report 2.3

MTH 332 Gary Davis

Analysis of students

preliminary year at college

To Predict a class grade

Abstract

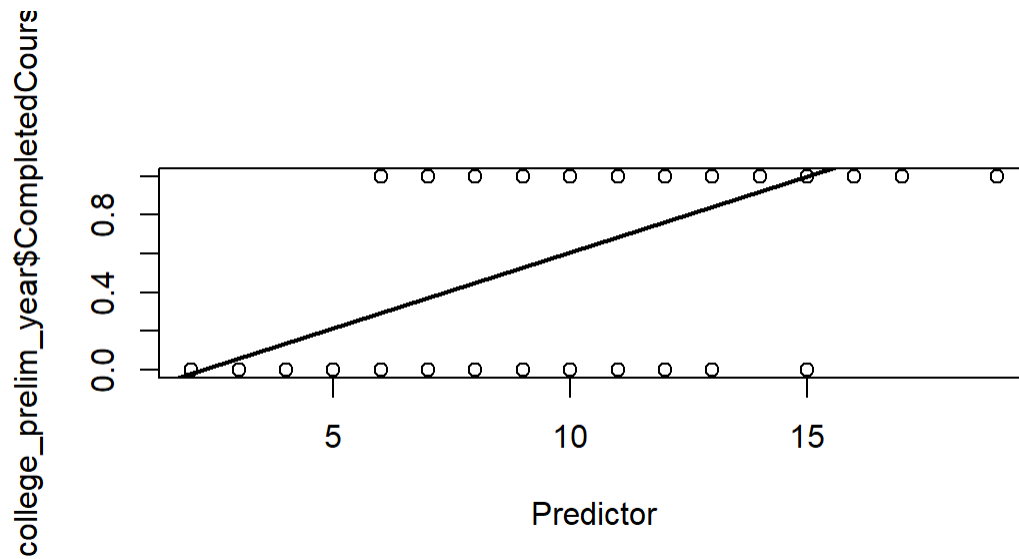
Using glm as a function in r the author of this paper predicts a binary outcome of passing a class based on a generated summary statistic of numeric representations of how they did qualitatively on their freshman orientation

Intro

The author loads the required libraries including dplyr. The author reads a modified table into RStudio as a programming Environment the table has been modified to fit the standard of camel case as this adds to the authors future ability to use function calls to access the data in the table. He then proceeds to link the desired columns (11,23,22,25,24,26) together to form a Data Frame in R using the dplyr package. He then sums across the rows of the table to form a summary statistic called "Predictor" he does so using The rowSums() function call. Then using a function call to the glm() function he trains a logistic model to predict future course grades. He then plots his data and the model which resulted from the function calls.

Analysis

The data shows that at around a predictor score of 10. The probability at a score of 10 or greater is more likely to pass. At a predictor score of 10 or less, it is more likely you fail. The likelihood for all values is represented by the following graph.



Conclusion

The data is fit to the logistic model fits as the likelihood of completing the course is well predicted by the predictor variable as a summary statistic.