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EECS 658

Question Answers

4a. Based on accuracy the linear regression machine learning model performed the best. This suggests that the ratio between the iris types may be linear.

4b. The naïve Bayesian model predicted an accuracy that is very close to linear regression but not quite as good. The naive Bayesian model is better suited to data that is all numerical so that may influence the disparity in accuracy.

4b. The polynomial of degree 2 regression had a similar outcome to the linear regression. However, this model falls short likely due to the nature of the data being spread in a more linear way.

4b. The polynomial of degree 3 regression had considerably less accuracy. This suggests the model is not a good fit and the data is dispersed in a non-cubic way.

4b. The kNN model uses classification that deals with discrete numbers while the regression model is continuous, so I believe that this is the reason for the lower accuracy.

4b. The linear discriminant analysis model uses discrete values as well, but this accuracy is slightly higher. It is not quite as good as linear regression, but the reason for the slight increase could be due to the linear nature of the data.

4b. The quadratic discriminant analysis did not perform well. This is likely due to the model assuming our distribution follows a gaussian distribution.