

# *LINEAR REGRESSION ON IRIS DATA (PROJECT1)*

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- Accuracy score is calculated based on the test set and predicted values  
**Accuracy score : 1.034482758620689**
- The accuracy is 100% for K = 5 . This model provides better fit.
- Same Steps are repeated for calculating different K values
- Accuracy score for k = 2: 0.5540540540540541 (55%)
- Accuracy score for k = 5 : 1.034482758620689 (100%)
- Accuracy score for k = 10: 1.0714285714285714 (100%)
- Accuracy score for k = 15: 1.1111111111111112
- Accuracy score for k = 20: 1.1428571428571428
- As we can conclude that the model predicts with good accuracy as the K value increases.

**When species values are Iris setosa: 2, Iris versicolor: 4, Iris virginica: 6**

- Accuracy score for k = 2: 0.24324324324324326
- Accuracy score for k = 5 : 1.0
- Accuracy score for k = 10: 1.0
- Accuracy score for k = 15: 1.1111111111111112
- Accuracy score for k = 20: 1.1428571428571428
- The model predicts same as before as we can see there is no big difference when we changes the species values.

Conclusion: This model has the best fit when we increase the K values and the accuracy score increases with respect to the partitions.