

## Linear Regression Assignment

Linear regression attempts to model the relationship between two variables by fitting a linear equation to observed data. One variable is considered to be an explanatory variable, and the other is considered to be a dependent variable. In our assignment, we want to relate the sepal width of Iris Versicolor to its sepal length using a linear regression model. The Versicolor sepal length and width are shown in the following image.



**Versicolor**

- ❖ You are given dataset of Sepal length and Sepal width. Using this dataset create notebook for linear regression model.
- ❖ In your notebook preprocess your dataset and make sure there are no missing values.
- ❖ Divide your data into 80% training data and 20% test data.
- ❖ Tune your model.
- ❖ Train your model.
- ❖ Calculate the mean squared error (MSE).
- ❖ Visualize your results.
- ❖ You have to explain every step of your work and why it is important in your notebook.

**Best of luck.**