# Predicting Flower Species Documentation

project Description: In this project, you will create a simple machine learning model to predict the species of flowers based on their features. You can use the famous Iris dataset, which contains measurements of four features (sepal length, sepal width, petal length, and petal width) for three different species of iris flowers (setosa, versicolor, and virginica).

Steps:

1. Importing Libraries
2. Reading Dataset
3. Exploring Data
4. Preprocessing
5. Building Model
6. Tuning
7. Building New Model (After Tuning)

I used Automation for the model tuning, the library which I used is called Optuna.

Optuna is a library used for Hyperparameters Tuning.

Steps for using Optuna:

> Firstly, we define an objective function in which we define the parameters we want to tune and give the range which the function will use, then we add the model inside the function, choose the optimization way, and return it
>
> Then, we create a study and finally we use the study to optimize giving it the objective function and the number of trials.

Link where I studied Optuna: Mastering Hyperparameter Tuning with Optuna: Boost Your ... - YouTube

I used GeeksforGees to learn more about logistic regression