**MODEL BUILDING**

**Save the model**

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So after using the model, how to save our trained model. So in this recipe we will save our trained model and we will also load the saved model.

So this is the recipe on how we can save trained model in [Python](https://www.projectpro.io/projects/data-science-projects/machine-learning-projects-in-python).

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### Step 1 - Import the library

from sklearn import model\_selection, datasets

from sklearn.tree import DecisionTreeClassifier

from sklearn.externals import joblib

import pickle

We have imported model\_selection, datasets, joblib, DecisionTreeClassifier and pickel which will be needed for the dataset.

### Step 2 - Setting up the Data

We have loaded inbuilt wine dataset and stored data in x and target in y. We have used test\_train\_split to split the dataset such that 30% of data is for testing the model.

dataset = datasets.load\_wine()

X = dataset.data; y = dataset.target X\_train,

X\_test, y\_train, y\_test = model\_selection.train\_test\_split(X, y, test\_size=0.3)

[Master the Art of Classification in Machine Learning to Become a Pro](https://www.projectpro.io/article/7-types-of-classification-algorithms-in-machine-learning/435)

### Step 3 - Training and Saving the model

We are using DecisionTreeClassifier as a model. We have trained the model by training data. We can save the model by using joblib.dump in which we have passed the parameter as model and the filename.

model = DecisionTreeClassifier()

model.fit(X\_train, y\_train)

filename = "Completed\_model.joblib"

joblib.dump(model, filename)

### Step 4 - Loading the saved model

So here we are loading the saved model by using joblib.load and after loading the model we have used score to get the score of the pretrained saved model.

loaded\_model = joblib.load(filename)

result = loaded\_model.score(X\_test, y\_test)

print(result)

So the output comes as:

0.9444444444444444