

Model Building

Train Test And Save Model

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Train Test and Save Model:-

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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 `pickle` 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)
```

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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