**TEAM ID:PNT2022TMID38246**

**PROJECT TITLE: Natural Diasters Intensity Analysis And Classification Using Artificial Intelligence**

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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 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)

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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**