Date	**15 November 2022**
Team ID	**PNT2022TMID38979**
Project Name	**Natural Disasters Intensity Analysis and Classification using Artificial Intelligence**

Model Building

Train Test and Save Model:

Table of Contents:

Step 1 – Import the library

```
From sklearn import model selection, datasets
From sklearn.tree import Decision Tree
Classifier
From sklearn.externals import joblib
Import pickle
```

We have imported model selection, datasets, joblib Decision Tree Classifier 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

Step 3 – Training and Saving the Model

We are using Decision Tree Classifier 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:

0.94444444