

30/5/24

Week-8

4:1

Ensemble - Random Forest

```
import numpy as np
import pandas as pd
import sklearn.ensemble import Random Forest
classifier
from sklearn import datasets
iris = datasets.load_iris()
type(iris)
iris_data = pd.DataFrame(iris.data)
type(iris_data)
x = iris_data.iloc[:, :-1].values
y = iris_data.iloc[:, -1].values
x_train, x_test, y_train, y_test = train_test_split(
    x, y, test_size = 0.33)
model = Random Forest classifier()
model.fit(x_train, y_train)
y_pred = model.predict(x_test)
accuracy_score(y_test, y_pred)
```

Ensemble boosting

```
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.ensemble import AdaBoostClassifier
iris = load_iris()
x = iris.data
y = iris.target
adaboost = AdaBoostClassifier(n_estimators=30, learning
    data=1)
adaboost.fit(x_train, y_train)
y_pred = adaboost.predict(x_test)
accuracy_score(y_test, y_pred)
```