random forest

March 24, 2023

0.1 Random forest

[1]:
```
import numpy as np
import pandas as pd
from matplotlib import pyplot as plt
```

[2]:
```
df = pd.read_csv('spam.csv')
```

[3]:
```
X = df.iloc[:, 0:-1].values
y = df.iloc[:, -1].values
```

[4]:
```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.25,␣
 ↪random_state = 0)
```

[6]:
```
from sklearn.ensemble import RandomForestClassifier
clf = RandomForestClassifier(random_state=0)
clf = clf.fit(X_train, y_train)
```

[7]:
```
y_pred = clf.predict(X_test)
```

[8]:
```
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)
print(cm)
```

```
[[674  17]
 [ 44 416]]
```

[9]:
```
from sklearn.metrics import accuracy_score
accuracy_score(y_test, y_pred)
```

[9]:
```
0.947002606429192
```

[ ]:
```

```