Cheatography

Python - Decision Tree & Random Forest Cheat Sheet

by DarioPittera (aggialavura) via cheatography.com/83764/cs/19971/

TO START

```
# IMPORT DATA LIBRARIES
import pandas as pd
import numpy as np
# IMPORT VIS LIBRARIES
import matplo tli b.p yplot as plt
import seaborn as sns
%matpl otlib inline
# IMPORT MODELLING LIBRARIES
from sklear n.m ode l_s ele ction import train_ -
tes t_split
# libraries for decision trees
from sklear n.tree import Decisi onT ree Cla -
ssifier
from sklear n.m etrics import classi fic ati on_ -
rep ort ,co nfu sio n_m atrix
# libraries for random forest
from sklear n.e nsemble import Random For est Cla -
ssifier
from sklear n.m etrics import classi fic ati on_ -
rep ort ,co nfu sio n_m atrix
```

PRELIMINARY OPERATIONS

df = pd.read_csv('data.csv')	import data
sns.pairplot(df,hue='col')	pairplot
df.info()	check info df
df.describe()	check stats df
df.head()	check head df

TRAIN MODEL - DECISION TREES

SPLIT DATASET

X = df[['col1','col2',etc.]]	create df features
y = df['col']	create df var to predict
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3)	split df in train and test df

FIT THE MODEL

tree = DecisionTreeClassifier()	instatiate model
tree.fit(X_train, y_train)	train/fit the model

TRAIN MODEL - DECISION TREES (cont)

MAKE PREDICTIONS

pred = tree.predict(X_test)	make predictions

✔ EVAUATE MODEL

```
print(classification_report(y_test,pred))
print(confusion_matrix(y_test,pred))
```

TRAIN MODEL - RANDOM FOREST

SPLIT DATASET

X = df[['col1','col2',etc.]]	create df features
y = df['col']	create df var to predict
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3)	split df in train and test df

FIT THE MODEL

rfc = RandomForestClassifier (n_estimators=200)*	instatiate model
rfc.fit(X_train, y_train)	train/fit the model

MAKE PREDICTIONS

rfc_pred = rfc.predict(X_test)	make predictions

✔ EVAUATE MODEL

```
print(confusion_matrix(y_test,rfc_pred))
print(classification_report(y_test,rfc_pred))
```

n_estimators: number of trees to be used in the forest.

By **DarioPittera** (aggialavura)

cheatography.com/aggialavura/

www.dariopittera.com

Not published yet.

Last updated 1st July, 2019.

Page 1 of 1.

Sponsored by **ApolloPad.com**

Everyone has a novel in them. Finish Yours!

https://apollopad.com