Python module tester

Use this Jupyter notebook to test whether your Python distribution has the modules required for the Thalesians' Python, data science, machine learning (ML), and artificial intelligence (AI) trainings.

Evaluate all code cells (those appearing in grey) by left-clicking on them and pressing Shift + Enter.

If all libraries / modules are present, there should be no error messages.

Standard Python modules

In [1]:
```
import csv
import datetime as dt
import dateutil.parser
import functools
import itertools
from itertools import cycle, islice
import json
import math
import random
import re
from subprocess import check_call
import sys
```

NumPy

In [2]:
```
import numpy as np
```

Pandas and pandas-datareader

In [3]:
```
import pandas as pd
import pandas_datareader.data as web
```

If you received the message `ModuleNotFoundError: No module named 'pandas_datareader'` then go to Anaconda Navigator -> Environments, select "All" (rather than "Installed"), and enter `pandas-datareader` under Search Packages. Tick the `pandas-datareader` package and hit "Apply" to install it.

SciPy

In [4]:
```
import scipy
from scipy import stats
from scipy.interpolate import griddata
from scipy.cluster.hierarchy import linkage
from scipy.spatial import distance
```

StatsModels

In [5]:
```
import statsmodels.api as sm
```

When running the code above, you may see the following warning, which should not cause any problems: `pandas.py:56: FutureWarning: The pandas.core.datetools module is deprecated and will be removed in a future version. Please use the pandas.tseries module instead.`

```
  from pandas.core import datetools
```

Matplotlib (PyLab)

In [6]:
```
import pylab
import matplotlib.pyplot as plt
import matplotlib.patches as mpatches
from matplotlib.pylab import rcParams
from matplotlib import cm
from matplotlib.ticker import LinearLocator, FormatStrFormatter
from mpl_toolkits.mplot3d import Axes3D
```

Seaborn

In [7]:
```
import seaborn as sns
```

Plotly

In [8]:
```
import plotly
import plotly.offline as py
import plotly.figure_factory as ff
import plotly.graph_objs as go
```

If you received the message `ModuleNotFoundError: No module named 'plotly'` then go to Anaconda Navigator -> Environments, select "All" (rather than "Installed"), and enter `plotly` under Search Packages. Tick the `plotly` package and hit "Apply" to install it.

Scikit-learn

In [9]:
```
from sklearn import linear_model
from sklearn.linear_model import LinearRegression
from sklearn import neural_network
from sklearn import metrics
from sklearn.metrics import mean_squared_error, f1_score, r2_score, roc_curve, auc
from sklearn.preprocessing import scale, StandardScaler, LabelEncoder
import sklearn.decomposition as sck_dec
from sklearn.model_selection import cross_val_score, StratifiedKFold, train_test_split
from sklearn.pipeline import Pipeline
from sklearn.datasets import make_moons, make_circles, make_classification, load_digits
from sklearn import tree
from sklearn.tree import export_graphviz
from sklearn import cluster
from sklearn import neighbors
from sklearn.ensemble import RandomForestClassifier
from sklearn.externals.six import StringIO
```

TensorFlow

In [10]:
```
import tensorflow as tf
```

```
C:\Programs\Win64\Anaconda\V5.2.0_3.6\lib\site-packages\h5py\__init__.py:36: FutureWarning:

Conversion of the second argument of issubdtype from `float` to `np.floating` is deprecated. In future, it will b
e treated as `np.float64 == np.dtype(float).type`.
```

If you received the message `ModuleNotFoundError: No module named 'tensorflow'` then go to Anaconda Navigator -> Environments, select "All" (rather than "Installed"), and enter `tensorflow` under Search Packages. Tick the `tensorflow` package and hit "Apply" to install it.

If, on the other hand, you see `__init__.py:36: Future Warning: Conversion of the second argument of issubdtype from float to np.floating is deprecated...` , this warning may safely be ignored.

Keras

In [11]:
```
import keras
from keras.models import load_model, Sequential
from keras.layers import Dense, Dropout, Flatten, Conv2D, MaxPooling2D, LSTM
from keras import optimizers
from keras.optimizers import RMSprop
from keras import backend as K
from keras.wrappers.scikit_learn import KerasClassifier
from keras.datasets import mnist
```

```
Using TensorFlow backend.
```

If you received the message `ModuleNotFoundError: No module named 'keras'` then go to Anaconda Navigator -> Environments, select "All" (rather than "Installed"), and enter `keras` under Search Packages. Tick the `keras` package and hit "Apply" to install it.

When running the code above, you may see the following message, which should not cause any problems: `Using TensorFlow backend.`

IPython/Jupyter

In [12]:
```
from IPython.display import Image as PImage
```