```
import pandas as pd
import numpy
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.ensemble import RandomForestClassifier
from sklearn.metrics import
classification_report,accuracy_score,confusion_matrix

data=load_iris()
print(data)
```

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'frame': None, 'target_names': array(['setosa', 'versicolor',
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plants dataset\n--------------------\n\n**Data Set Characteristics:**\
n\n    :Number of Instances: 150 (50 in each of three classes)\
n    :Number of Attributes: 4 numeric, predictive attributes and the
class\n    :Attribute Information:\n        - sepal length in cm\n
- sepal width in cm\n        - petal length in cm\n        - petal
width in cm\n        - class:\n                - Iris-Setosa\n
- Iris-Versicolour\n                - Iris-Virginica\
n                \n    :Summary Statistics:\n\n    ============== ====
==== ======= ===== ====================\n                    Min  Max
Mean    SD   Class Correlation\n    ============== ==== ==== =======
===== ====================\n    sepal length:   4.3  7.9   5.84   0.83
0.7826\n    sepal width:    2.0  4.4   3.05   0.43   -0.4194\n
petal length:   1.0  6.9   3.76   1.76    0.9490  (high!)\n    petal
width:    0.1  2.5   1.20   0.76    0.9565  (high!)\n
============== ==== ==== ======= ===== ====================\n\
n    :Missing Attribute Values: None\n    :Class Distribution: 33.3%
for each of 3 classes.\n    :Creator: R.A. Fisher\n    :Donor: Michael
Marshall (MARSHALL%PLU@io.arc.nasa.gov)\n    :Date: July, 1988\n\nThe
famous Iris database, first used by Sir R.A. Fisher. The dataset is
taken\nfrom Fisher\'s paper. Note that it\'s the same as in R, but not
as in the UCI\nMachine Learning Repository, which has two wrong data
points.\n\nThis is perhaps the best known database to be found in the\
npattern recognition literature.  Fisher\'s paper is a classic in the
field and\nis referenced frequently to this day.  (See Duda & Hart,
for example.)  The\ndata set contains 3 classes of 50 instances each,
where each class refers to a\ntype of iris plant.  One class is
```

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linearly separable from the other 2; the\nlatter are NOT linearly
separable from each other.\n\n.. topic:: References\n\n   - Fisher,
R.A. "The use of multiple measurements in taxonomic problems"\n
Annual Eugenics, 7, Part II, 179-188 (1936); also in "Contributions
to\n     Mathematical Statistics" (John Wiley, NY, 1950).\n   - Duda,
R.O., & Hart, P.E. (1973) Pattern Classification and Scene Analysis.\n
(Q327.D83) John Wiley & Sons.  ISBN 0-471-22361-1.  See page 218.\n
- Dasarathy, B.V. (1980) "Nosing Around the Neighborhood: A New
System\n     Structure and Classification Rule for Recognition in
Partially Exposed\n     Environments".  IEEE Transactions on Pattern
Analysis and Machine\n     Intelligence, Vol. PAMI-2, No. 1, 67-71.\n
- Gates, G.W. (1972) "The Reduced Nearest Neighbor Rule".  IEEE
Transactions\n     on Information Theory, May 1972, 431-433.\n   - See
also: 1988 MLC Proceedings, 54-64.  Cheeseman et al"s AUTOCLASS II\n
conceptual clustering system finds 3 classes in the data.\n   - Many,
many more ...', 'feature_names': ['sepal length (cm)', 'sepal width
(cm)', 'petal length (cm)', 'petal width (cm)'], 'filename':
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```

```
x=iris.data
y=iris.target

x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.2,
random_state=42)

model=RandomForestClassifier(n_estimators=100)

model.fit(x_train,y_train)
y_pred=model.predict(x_test)

print("classification Report:\n",classification_report(y_test,y_pred))
```

```
classification Report:
               precision    recall  f1-score   support

           0       1.00      1.00      1.00        10
           1       1.00      1.00      1.00         9
           2       1.00      1.00      1.00        11

    accuracy                           1.00        30
   macro avg       1.00      1.00      1.00        30
weighted avg       1.00      1.00      1.00        30


corr_mat=data.corr()
ptint(corr_mat)

---------------------------------------------------------------------
-----
KeyError                                  Traceback (most recent call
last)
~\anaconda3\lib\site-packages\sklearn\utils\__init__.py in
```

```
__getattr__(self, key)
    116         try:
--> 117             return self[key]
    118         except KeyError:

KeyError: 'corr'

During handling of the above exception, another exception occurred:

AttributeError                            Traceback (most recent call
last)
~\AppData\Local\Temp\ipykernel_17088\2000260655.py in <module>
----> 1 corr_mat=data.corr()
      2 ptint(corr_mat)

~\anaconda3\lib\site-packages\sklearn\utils\__init__.py in
__getattr__(self, key)
    117             return self[key]
    118         except KeyError:
--> 119             raise AttributeError(key)
    120
    121     def __setstate__(self, state):

AttributeError: corr
```