import numpy as np

import pandas as pd

from sklearn import tree

from sklearn import preprocessing

titanic\_train = pd.read\_csv("train.csv")

new\_age\_var = np.where(titanic\_train["Age"].isnull(),28,titanic\_train["Age"])

titanic\_train["Age"]=new\_age\_var

label\_encoder=preprocessing.LabelEncoder()

encoded\_sex=label\_encoder.fit\_transform(titanic\_train['sex'])

Traceback (most recent call last):

File "C:\ProgramData\Anaconda3\lib\site-packages\pandas\core\indexes\base.py", line 2646, in get\_loc

return self.\_engine.get\_loc(key)

File "pandas\\_libs\index.pyx", line 111, in pandas.\_libs.index.IndexEngine.get\_loc

File "pandas\\_libs\index.pyx", line 138, in pandas.\_libs.index.IndexEngine.get\_loc

File "pandas\\_libs\hashtable\_class\_helper.pxi", line 1618, in pandas.\_libs.hashtable.PyObjectHashTable.get\_item

File "pandas\\_libs\hashtable\_class\_helper.pxi", line 1626, in pandas.\_libs.hashtable.PyObjectHashTable.get\_item

KeyError: 'sex'

During handling of the above exception, another exception occurred:

Traceback (most recent call last):

File "<ipython-input-9-f0bb1314115e>", line 1, in <module>

encoded\_sex=label\_encoder.fit\_transform(titanic\_train['sex'])

File "C:\ProgramData\Anaconda3\lib\site-packages\pandas\core\frame.py", line 2800, in \_\_getitem\_\_

indexer = self.columns.get\_loc(key)

File "C:\ProgramData\Anaconda3\lib\site-packages\pandas\core\indexes\base.py", line 2648, in get\_loc

return self.\_engine.get\_loc(self.\_maybe\_cast\_indexer(key))

File "pandas\\_libs\index.pyx", line 111, in pandas.\_libs.index.IndexEngine.get\_loc

File "pandas\\_libs\index.pyx", line 138, in pandas.\_libs.index.IndexEngine.get\_loc

File "pandas\\_libs\hashtable\_class\_helper.pxi", line 1618, in pandas.\_libs.hashtable.PyObjectHashTable.get\_item

File "pandas\\_libs\hashtable\_class\_helper.pxi", line 1626, in pandas.\_libs.hashtable.PyObjectHashTable.get\_item

KeyError: 'sex'

encoded\_sex=label\_encoder.fit\_transform(titanic\_train['Sex'])

tree\_model =tree.DecisionTreeClassifier()

tree\_model.fit(x=pd.DataFrame(encoded\_sex),y=titanic\_train["Survived"])

Traceback (most recent call last):

File "<ipython-input-12-1f03fced82fc>", line 1, in <module>

tree\_model.fit(x=pd.DataFrame(encoded\_sex),y=titanic\_train["Survived"])

TypeError: fit() got an unexpected keyword argument 'x'

tree\_model.fit(X=pd.DataFrame(encoded\_sex),y=titanic\_train["Survived"])

Out[13]:

DecisionTreeClassifier(class\_weight=None, criterion='gini', max\_depth=None,

max\_features=None, max\_leaf\_nodes=None,

min\_impurity\_decrease=0.0, min\_impurity\_split=None,

min\_samples\_leaf=1, min\_samples\_split=2,

min\_weight\_fraction\_leaf=0.0, presort=False,

random\_state=None, splitter='best')

with open("Dtree1.dot",'w') as f:

f=tree.export\_graphviz(tree\_model,feature\_name=["Sex"],out\_file=f);

Traceback (most recent call last):

File "<ipython-input-14-2a496322598e>", line 1, in <module>

f=tree.export\_graphviz(tree\_model,feature\_name=["Sex"],out\_file=f);

NameError: name 'f' is not defined

with open["Dtree1.dot",'w') as f:

f=tree.export\_graphviz(tree\_model,feature\_name=["Sex"],out\_file=f);

File "<ipython-input-15-687eba936548>", line 1

with open["Dtree1.dot",'w') as f:

^

SyntaxError: invalid syntax

with open("Dtree1.dot",'w') as f:

f=tree.export\_graphviz(tree\_model,feature\_name=["Sex"],out\_file=f);

Traceback (most recent call last):

File "<ipython-input-16-662be6cabbc0>", line 2, in <module>

f=tree.export\_graphviz(tree\_model,feature\_name=["Sex"],out\_file=f);

TypeError: export\_graphviz() got an unexpected keyword argument 'feature\_name'

with open("Dtree1.dot",'w') as f:

f=tree.export\_graphviz

with open("Dtree1.dot",'w') as f:

f=tree.export\_graphviz(tree\_model,feature\_name=["Sex"],out\_file=f);

Traceback (most recent call last):

File "<ipython-input-18-662be6cabbc0>", line 2, in <module>

f=tree.export\_graphviz(tree\_model,feature\_name=["Sex"],out\_file=f);

TypeError: export\_graphviz() got an unexpected keyword argument 'feature\_name'

f=tree.export\_graphviz(tree\_model,feature\_names=["Sex"],out\_file=f);

Traceback (most recent call last):

File "<ipython-input-19-ca3b63882245>", line 1, in <module>

f=tree.export\_graphviz(tree\_model,feature\_names=["Sex"],out\_file=f);

File "C:\ProgramData\Anaconda3\lib\site-packages\sklearn\tree\export.py", line 775, in export\_graphviz

exporter.export(decision\_tree)

File "C:\ProgramData\Anaconda3\lib\site-packages\sklearn\tree\export.py", line 403, in export

self.head()

File "C:\ProgramData\Anaconda3\lib\site-packages\sklearn\tree\export.py", line 423, in head

self.out\_file.write('digraph Tree {\n')

ValueError: I/O operation on closed file.

with open("Dtree1.dot",'w') as f:

f=tree.export\_graphviz(tree\_model,feature\_names=["Sex"],out\_file=f);

predictors=pd.Dataframe([enclosed\_sex,titanic\_train['Age']]).T

Traceback (most recent call last):

File "<ipython-input-21-f0a16ac0236b>", line 1, in <module>

predictors=pd.Dataframe([enclosed\_sex,titanic\_train['Age']]).T

File "C:\ProgramData\Anaconda3\lib\site-packages\pandas\\_\_init\_\_.py", line 262, in \_\_getattr\_\_

raise AttributeError(f"module 'pandas' has no attribute '{name}'")

AttributeError: module 'pandas' has no attribute 'Dataframe'

pd.Dataframe()

Traceback (most recent call last):

File "<ipython-input-22-7557569d9794>", line 1, in <module>

pd.Dataframe()

File "C:\ProgramData\Anaconda3\lib\site-packages\pandas\\_\_init\_\_.py", line 262, in \_\_getattr\_\_

raise AttributeError(f"module 'pandas' has no attribute '{name}'")

AttributeError: module 'pandas' has no attribute 'Dataframe'

import dataframe

Traceback (most recent call last):

File "<ipython-input-23-93adf5769a0c>", line 1, in <module>

import dataframe

ModuleNotFoundError: No module named 'dataframe'

predictors=pd.Dataframe([enclosed\_sex,titanic\_train['Pclass']]).T

Traceback (most recent call last):

File "<ipython-input-24-af0604c8ebee>", line 1, in <module>

predictors=pd.Dataframe([enclosed\_sex,titanic\_train['Pclass']]).T

File "C:\ProgramData\Anaconda3\lib\site-packages\pandas\\_\_init\_\_.py", line 262, in \_\_getattr\_\_

raise AttributeError(f"module 'pandas' has no attribute '{name}'")

AttributeError: module 'pandas' has no attribute 'Dataframe'

predictors=pd.DataFrame([enclosed\_sex,titanic\_train['Age']]).T

Traceback (most recent call last):

File "<ipython-input-25-abff9dcf10c3>", line 1, in <module>

predictors=pd.DataFrame([enclosed\_sex,titanic\_train['Age']]).T

NameError: name 'enclosed\_sex' is not defined

predictors=pd.DataFrame([encoded\_sex,titanic\_train['Age']]).T

tree\_model.fit(X=predictors,y=titanic\_train["Survived"])

Out[27]:

DecisionTreeClassifier(class\_weight=None, criterion='gini', max\_depth=None,

max\_features=None, max\_leaf\_nodes=None,

min\_impurity\_decrease=0.0, min\_impurity\_split=None,

min\_samples\_leaf=1, min\_samples\_split=2,

min\_weight\_fraction\_leaf=0.0, presort=False,

random\_state=None, splitter='best')

f=tree.export\_graphviz(tree\_model,feature\_names=["Sex","Age"],out\_file=f);

with open ("Dtree2.dot",'w') as f:

f=tree.export\_graphviz(tree\_model,feature\_names=["Sex","Age"],out\_file=f);

predictors =pd.DataFrame([encoded\_sex,titanic\_train["Age"]]).T

tree\_model=tree.DecisionTreeClassifier(max\_depth=8)

tree\_model.fit(X=predictors,y=titanic\_train["Survived"])

Out[50]:

DecisionTreeClassifier(class\_weight=None, criterion='gini', max\_depth=8,

max\_features=None, max\_leaf\_nodes=None,

min\_impurity\_decrease=0.0, min\_impurity\_split=None,

min\_samples\_leaf=1, min\_samples\_split=2,

min\_weight\_fraction\_leaf=0.0, presort=False,

random\_state=None, splitter='best')

tree\_model.score(X=predictors,y=titanic\_train["Survived"])

Out[51]: 0.8143982002249719