

# Train the model in IBM

IBM Cloud Pak for Data

Welcome, Hamsha vivinya!

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models

Yesterday at 06:37 PM

```
In [1]: confusion_matrix(y_test, model.predict(X_test))

Out[1]: array([[56, 1],
               [ 0, 22]])

In [2]: print("Accuracy is {round(accuracy_score(y_test, model.predict(X_test))*100, 2)}%")
Accuracy is {round(accuracy_score(y_test, model.predict(X_test))*100, 2)}%

In [2]: ## IBM Deployment

In [3]: pip install -U ibm-watson-machine-learning

Requirement already satisfied: ibm-watson-machine-learning in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (1.0.257)
Requirement already satisfied: certifi in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (2022.9.24)
Requirement already satisfied: packaging in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (21.3)
Requirement already satisfied: tabulate in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (0.8.9)
Requirement already satisfied: importlib-metadata in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (4.8.2)
Requirement already satisfied: pandas<1.5.0,>=0.24.2 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (1.3.4)
Requirement already satisfied: requests in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (2.26.0)
Requirement already satisfied: urllib3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (1.26.7)
Requirement already satisfied: ibm-cos-sdk==2.11.* in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (2.11.0)
Requirement already satisfied: lomond in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (0.3.3)
Requirement already satisfied: ibm-cos-sdk-s3transfer==2.11.0 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm-watson-machine-learning) (2.11.0)
Requirement already satisfied: ibm-cos-sdk-core==2.11.0 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm-watson-machine-learning) (2.11.0)
Requirement already satisfied: jmespath<1.0.0,>=0.7.1 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm-watson-machine-learning) (0.10.0)
Requirement already satisfied: python-dateutil<3.0.0,>=2.1 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk-core==2.11.0->ibm-watson-machine-learning) (2.8.2)
Requirement already satisfied: pytz==2017.3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from pandas<1.5.0,>=0.24.2->ibm-watson-machine-learning) (2021.3)
Requirement already satisfied: numpy>=1.17.3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from pandas<1.5.0,>=0.24.2->ibm-watson-machine-learning) (1.20.3)
Requirement already satisfied: six>=1.5 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from python-dateutil<3.0.0,>=2.1->ibm-cos-sdk-core==2.11.0->ibm-watson-machine-learning) (1.15.0)
Requirement already satisfied: idna<4,>=2.5 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from requests->ibm-watson-machine-learning) (3.3)
Requirement already satisfied: charset-normalizer==2.0.0 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from requests->ibm-watson-machine-learning) (2.0.4)
Requirement already satisfied: zipcode>=0.5 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from importlib-metadata->ibm-watson-machine-learning) (3.6.0)
Requirement already satisfied: gyparsing<3.0.5,>=2.0.2 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from packaging->ibm-watson-machine-learning) (3.0.4)
Note: you may need to restart the kernel to use updated packages.
```

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```
}
client=APIClient(uml_credentials)

In [26]: def guid_from_space_name(client, space_name):
         space = client.spaces.get_details()
         return(next(item for item in space['resources'] if item['entity']['name'] == space_name)['metadata']['id'])

In [27]: space_uid = guid_from_space_name(client, 'models')
         print("Space UID =" + space_uid)

         Space UID =7e295984-bbaa-4705-8620-00976f79199b

In [28]: client.set.default_space(space_uid)

Out[28]: 'SUCCESS'

In [29]: client.software_specifications.list()

-----
NAME                                ASSET_ID                                TYPE
default_py3.6                       0062b8c9-8b7d-44a0-a9b9-46c416adcb09 base
kernel-spark3.2-scala2.12           020d69ce-7ac1-5e68-ac1a-31189867356a base
pytorch-onnx_1.3-py3.7-edt         069ea134-3346-5748-b513-49120e15d288 base
scikit-learn_0.20-py3.6             09c5a1d0-9c1e-4473-a344-eb7b665ff687 base
spark-mllib_3.0-scala2.12          09f4cfff-90a7-5899-b9ed-1ef348aebdee base
pytorch-onnx_rt22.1-py3.9          0b848dd4-e681-5599-be41-b5f6fcc6471 base
ai-function_0.1-py3.6              0cd00f1e-5376-4f4d-92dd-da3b69aa90da base
shiny-r3.6                          0e6e79df-875e-4f24-8ae9-62dcc2148306 base
tensorflow_2.4-py3.7-horovod       1092590a-307d-563d-9b62-4eb7d64b3f22 base
pytorch_1.1-py3.6                  10ec12d6-6b30-4ccc-8392-3e922c096a92 base
tensorflow_1.15-py3.6-ddl          111e41b3-de2c-5422-a4d6-bf776828c4b7 base
autosl-kb_rt12.2-py3.10            125b6d9a-5b1f-5e8d-972a-b251688ccf40 base
runtime-22.1-py3.9                 12b31e17-24d8-5082-900f-0eb31f9fd3cb base
scikit-learn_0.22-py3.6             154010fa-5b3b-4ac1-82af-4d5ee5abbc85 base
default_r3.6                       1b70aec3-ab34-4b87-8aa0-a4a3c829ba36 base
pytorch-onnx_1.3-py3.6             1bc6029a-cc97-56da-b8e0-39c3880d0e7 base
kernel-spark3.3-r3.6               1c9e5454-f216-59dd-a20e-474a5c0f5988 base
pytorch-onnx_rt22.1-nv3.9-edt       1d362186-7ad5-5b5d-8b6c-9a8880bde17f base
```