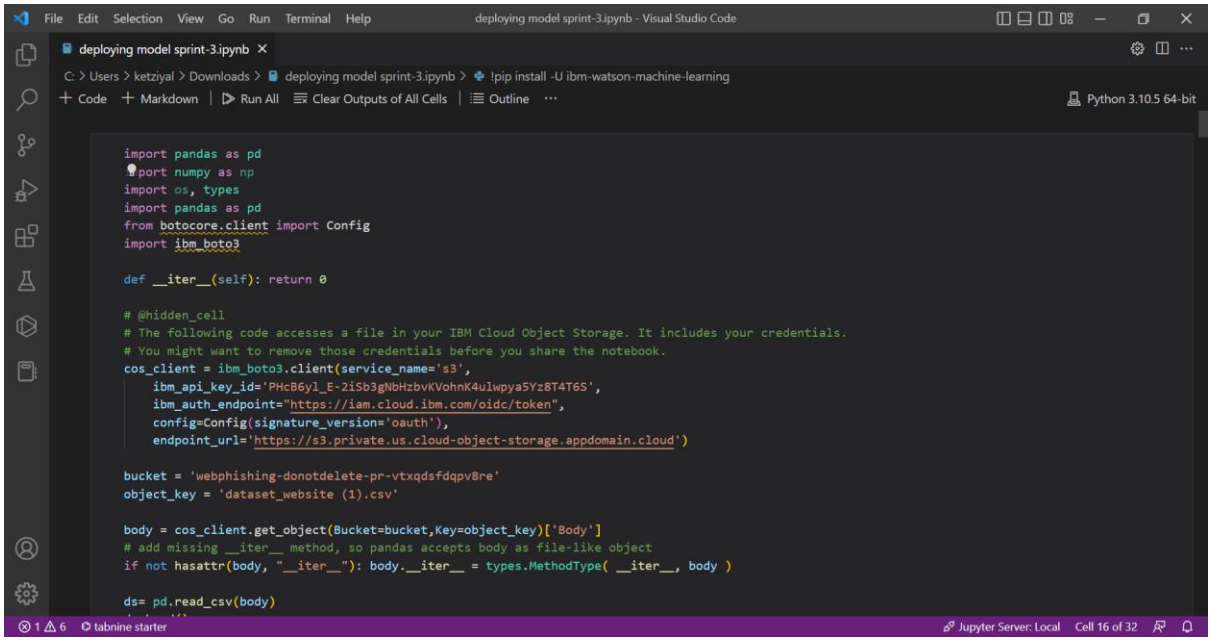
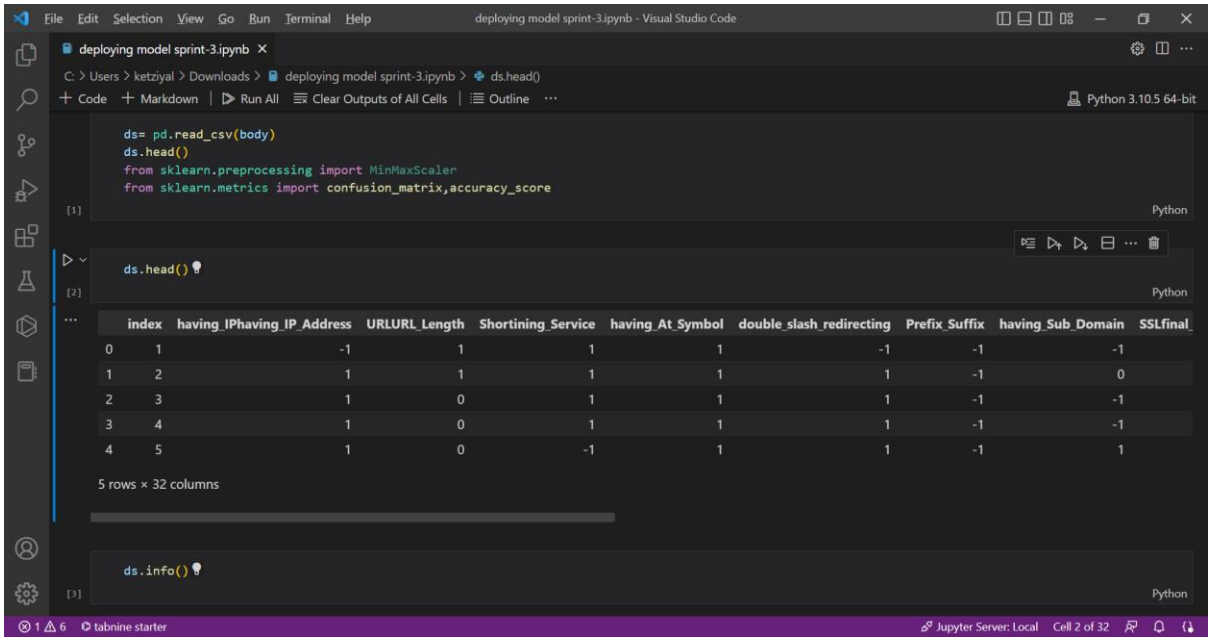
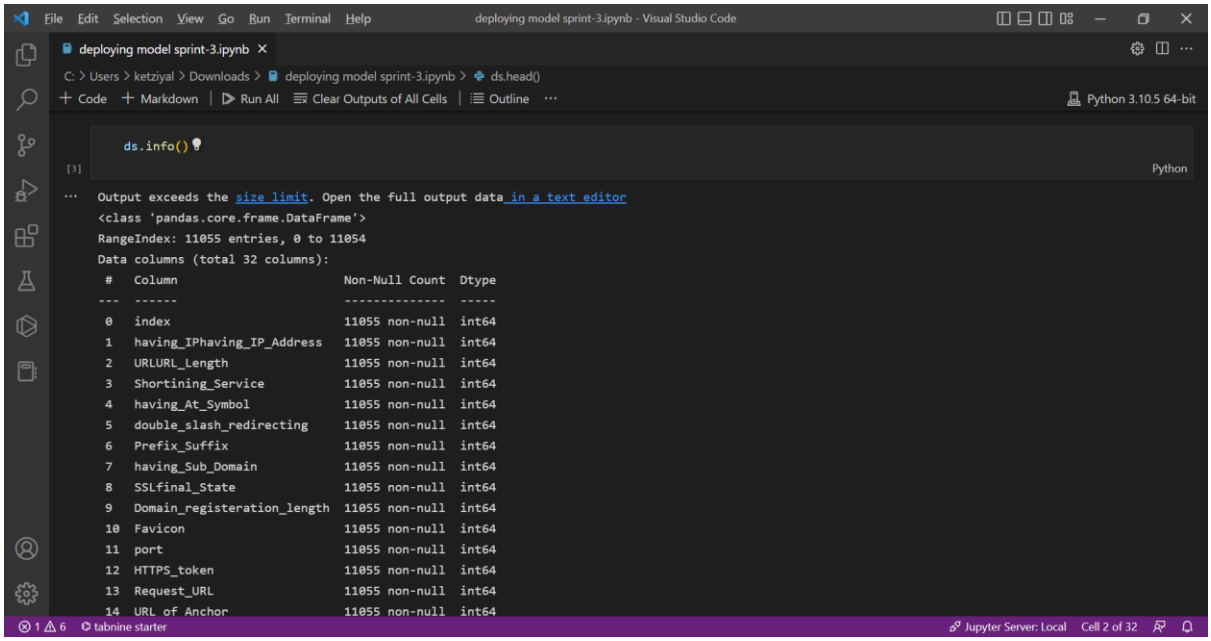
SCREENSHOTS

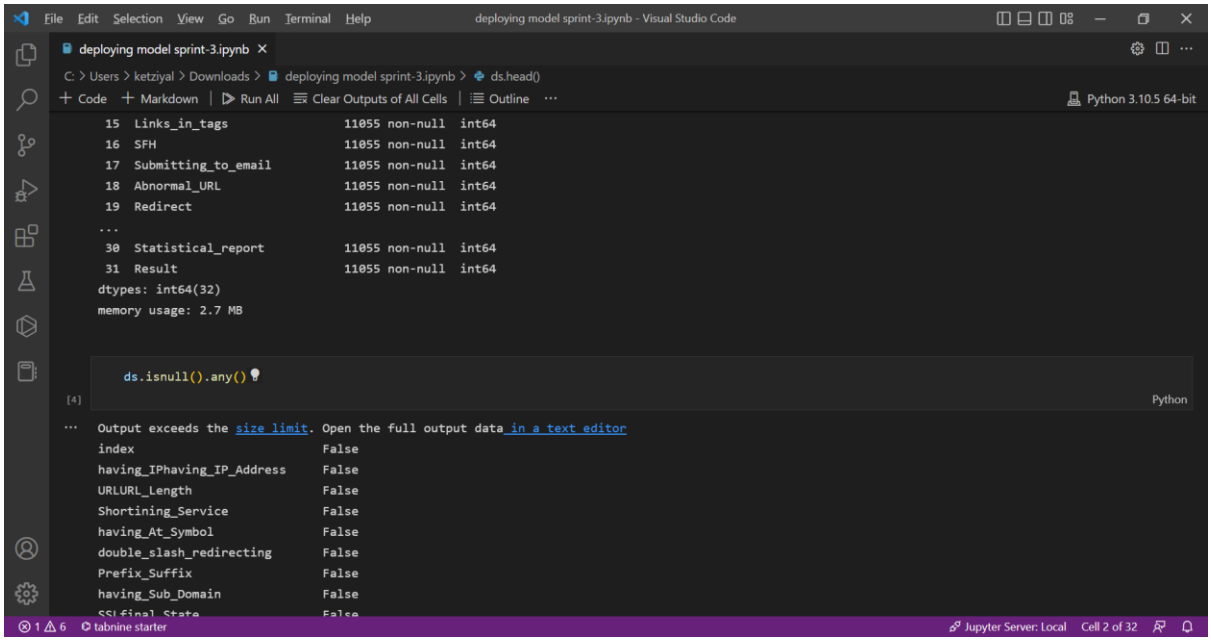
Project name	Web phishing detection
Team ID	PNT2022TMID43023

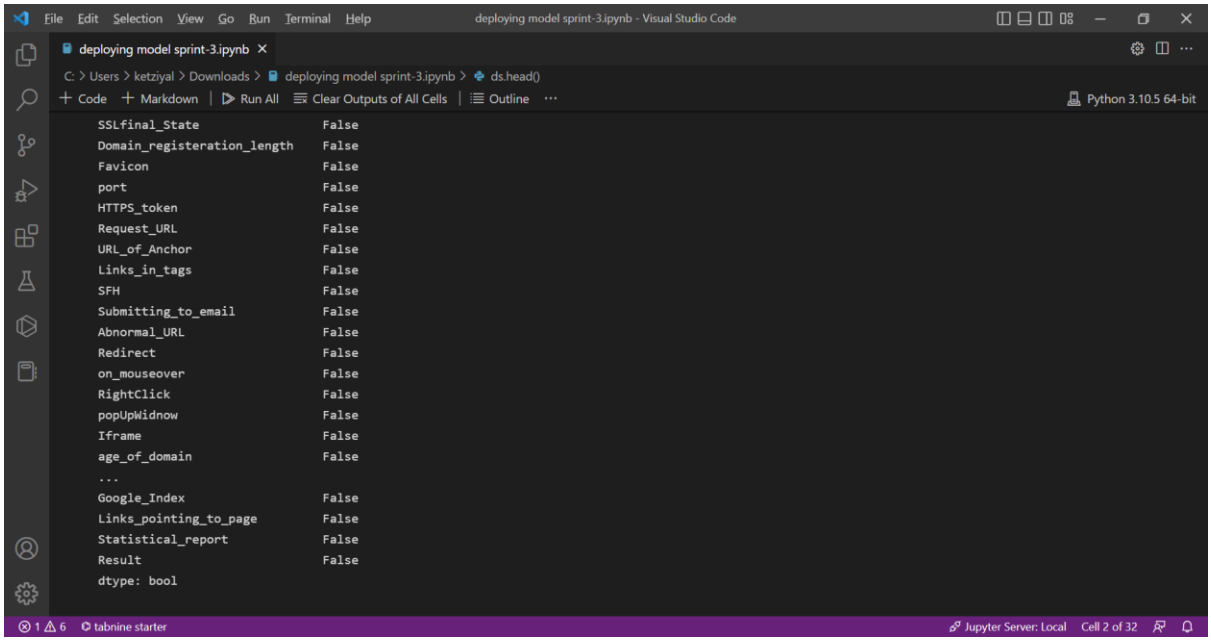
DEPLOYED MODEL :

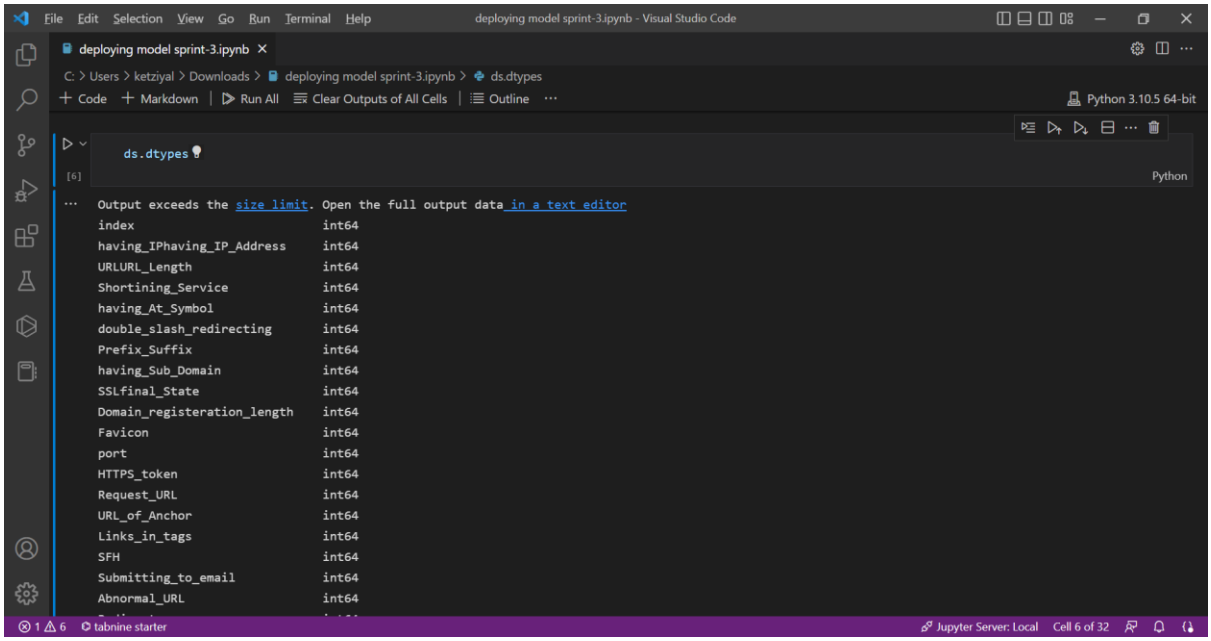


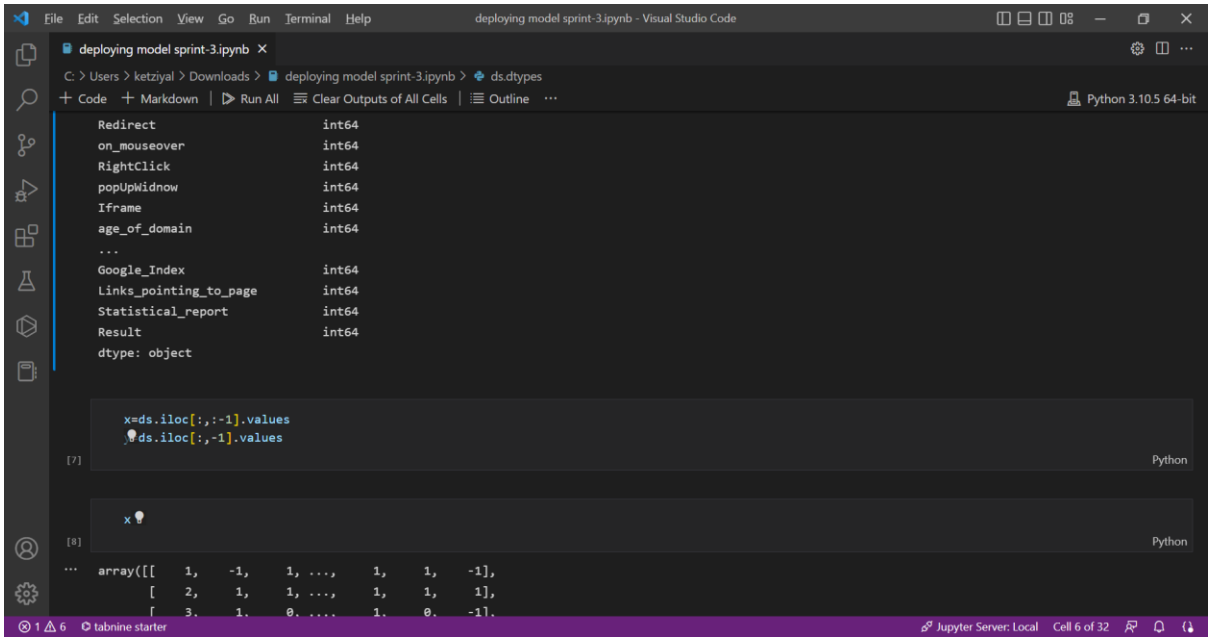


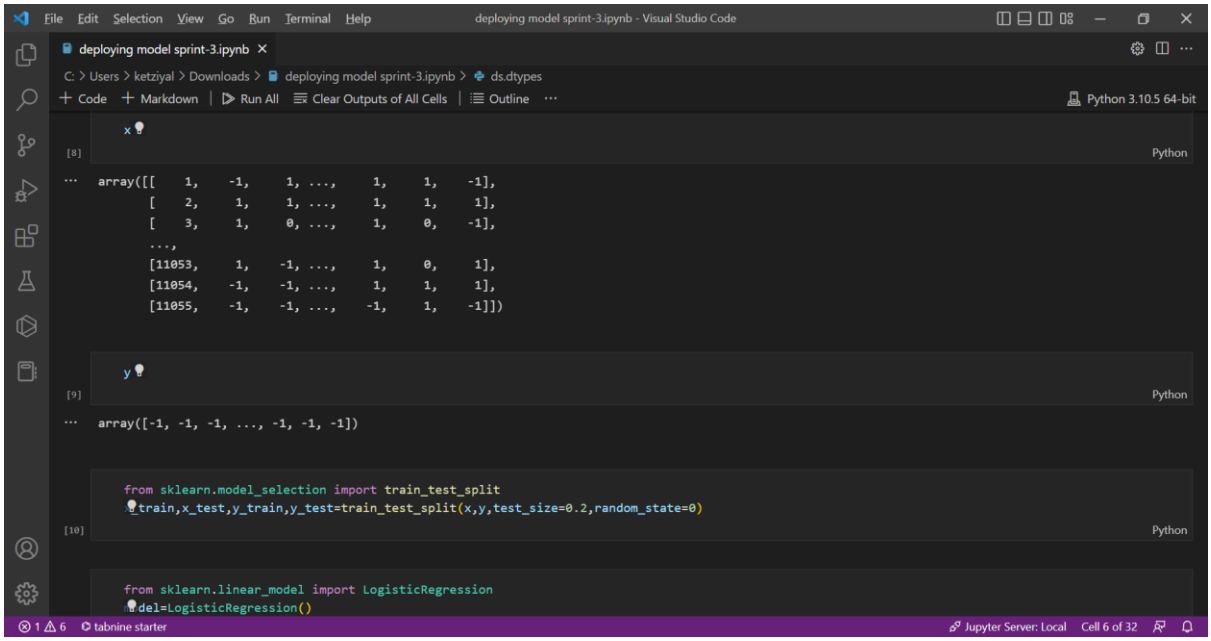

File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > ds.head()
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
ds.info()
[3]
Python
Output exceeds the size limit. Open the full output data in a text editor
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 11055 entries, 0 to 11054
Data columns (total 32 columns):
Column Non-Null Count Dtype
--- ------ -------------- -----
0 index 11055 non-null int64
1 having_IPhaving_IP_Address 11055 non-null int64
2 URLURL_Length 11055 non-null int64
3 Shortining_Service 11055 non-null int64
4 having_At_Symbol 11055 non-null int64
5 double_slash_redirecting 11055 non-null int64
6 Prefix_Suffix 11055 non-null int64
7 having_Sub_Domain 11055 non-null int64
8 SSLfinal_State 11055 non-null int64
9 Domain_registeration_length 11055 non-null int64
10 Favicon 11055 non-null int64
11 port 11055 non-null int64
12 HTTPS_token 11055 non-null int64
13 Request_URL 11055 non-null int64
14 URL_of_Anchor 11055 non-null int64
1 6 tabnine starter
Jupyter Server: Local Cell 2 of 32

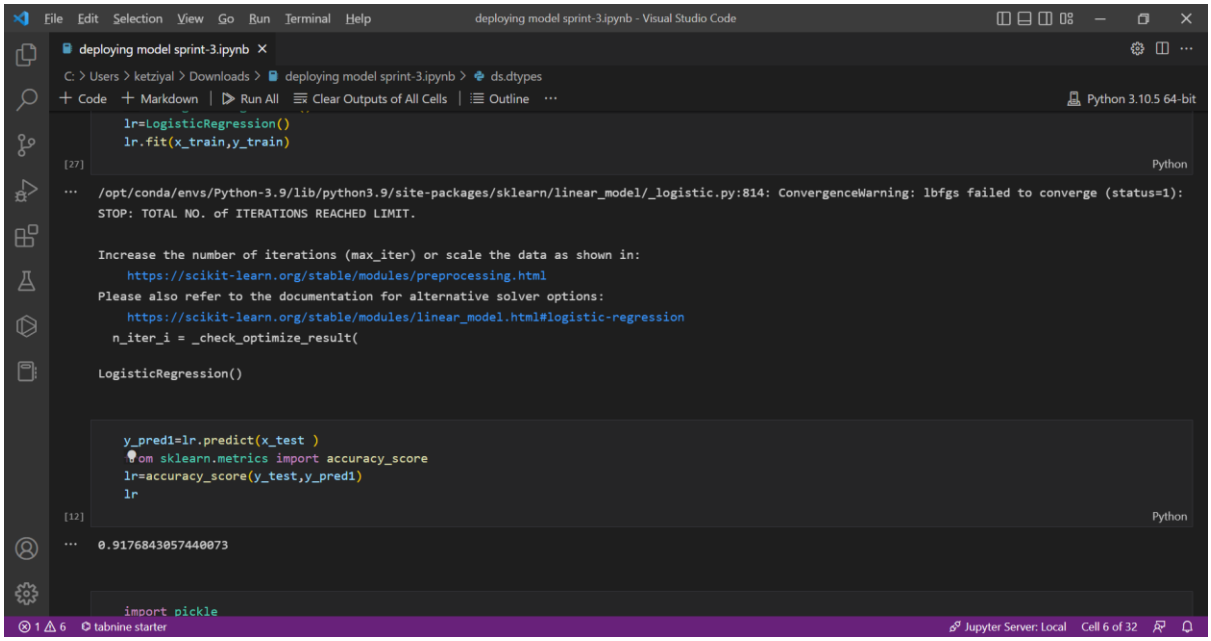

File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > ds.head()
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
15 Links_in_tags 11055 non-null int64
16 SFH 11055 non-null int64
17 Submitting_to_email 11055 non-null int64
18 Abnormal_URL 11055 non-null int64
19 Redirect 11055 non-null int64
...
30 Statistical_report 11055 non-null int64
31 Result 11055 non-null int64
dtypes: int64(32)
memory usage: 2.7 MB
ds.isnull().any()
[4]
Python
Output exceeds the size limit. Open the full output data in a text editor
index False
having_IPhaving_IP_Address False
URLURL_Length False
Shortining_Service False
having_At_Symbol False
double_slash_redirecting False
Prefix_Suffix False
having_Sub_Domain False
1 6 tabnine starter
Jupyter Server: Local Cell 2 of 32

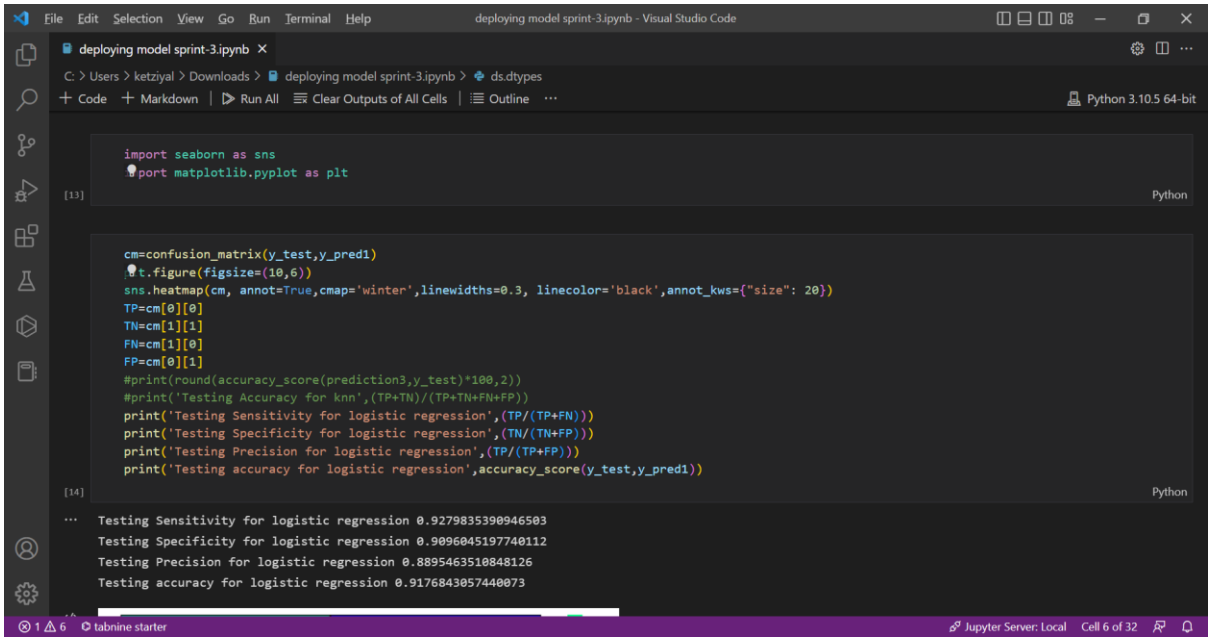

File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > ds.head()
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
SSLfinal_State False
Domain_registeration_length False
Favicon False
port False
HTTPS_token False
Request_URL False
URL_of_Anchor False
Links_in_tags False
SFH False
Submitting_to_email False
Abnormal_URL False
Redirect False
on_mouseover False
RightClick False
popUpWidnow False
Iframe False
age_of_domain False
...
Google_Index False
Links_pointing_to_page False
Statistical_report False
Result False
dtype: bool
1 6 tabnine starter
Jupyter Server: Local Cell 2 of 32

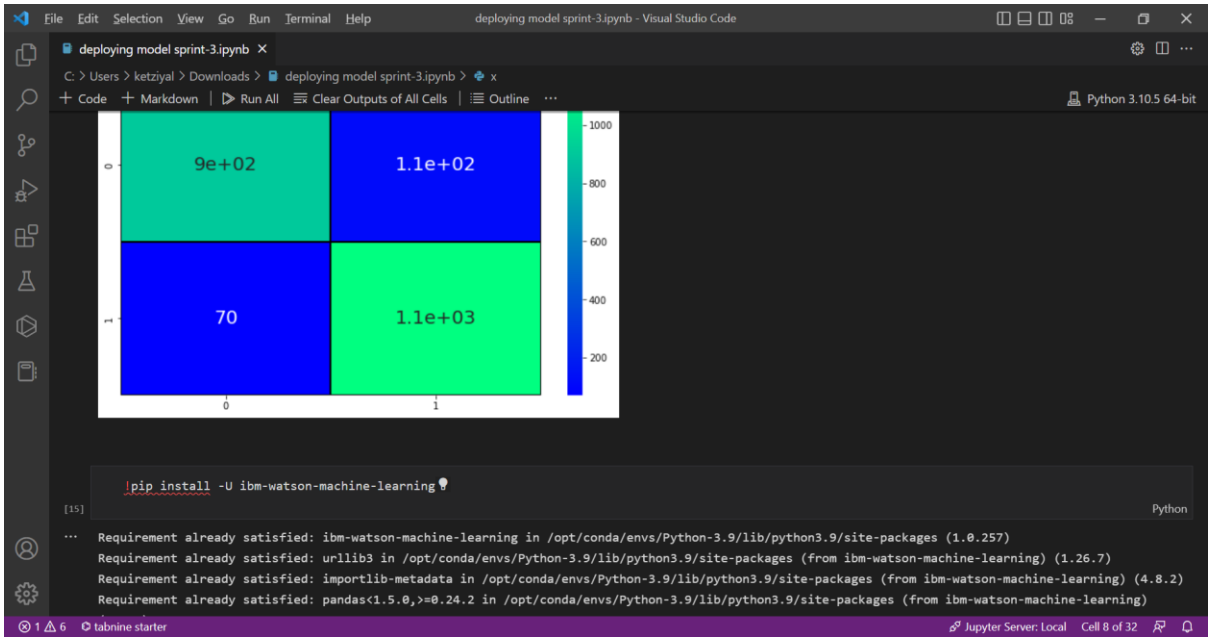

File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > ds.dtypes
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
ds.dtypes
[6]
Python
Output exceeds the size limit. Open the full output data in a text editor
index int64
having_IPhaving_IP_Address int64
URLURL_Length int64
Shortining_Service int64
having_At_Symbol int64
double_slash_redirecting int64
Prefix_Suffix int64
having_Sub_Domain int64
SSLfinal_State int64
Domain_registeration_length int64
Favicon int64
port int64
HTTPS_token int64
Request_URL int64
URL_of_Anchor int64
Links_in_tags int64
SFH int64
Submitting_to_email int64
Abnormal_URL int64
1 6 tabnine starter
Jupyter Server: Local Cell 6 of 32

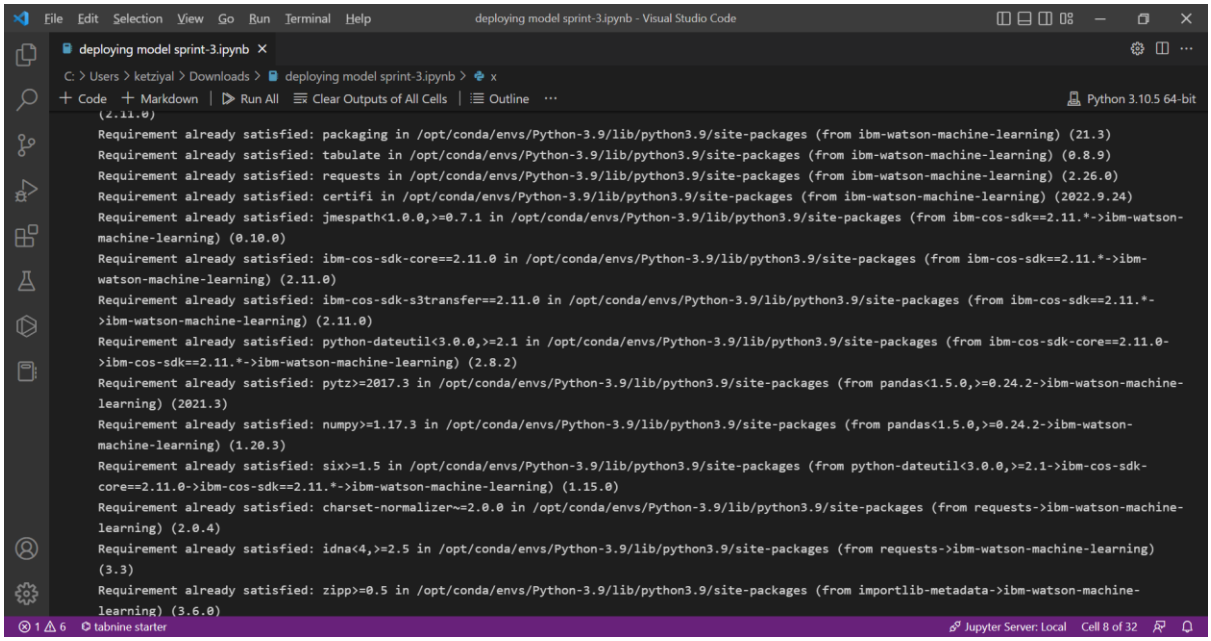

File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > ds.dtypes
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
Redirect int64
on_mouseover int64
RightClick int64
popUpWidnow int64
Iframe int64
age_of_domain int64
...
Google_Index int64
Links_pointing_to_page int64
Statistical_report int64
Result int64
dtype: object
x=ds.iloc[:,:-1].values
ds.iloc[:,-1].values
[7]
Python
x
[8]
Python
array([[1, -1, 1, ..., 1, 1, -1],
[2, 1, 1, ..., 1, 1, 1],
[3, 1, 0, ..., 1, 0, -1],
1 6 tabnine starter
Jupyter Server: Local Cell 6 of 32


File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > ds.dtypes
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
x
[8]
Python
array([[1, -1, 1, ..., 1, 1, -1],
[2, 1, 1, ..., 1, 1, 1],
[3, 1, 0, ..., 1, 0, -1],
...,
[11053, 1, -1, ..., 1, 0, 1],
[11054, -1, -1, ..., 1, 1, 1],
[11055, -1, -1, ..., -1, 1, -1]])
y
[9]
Python
array([-1, -1, -1, ..., -1, -1, -1])
from sklearn.model_selection import train_test_split
train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.2,random_state=0)
[10]
Python
from sklearn.linear_model import LogisticRegression
del=LogisticRegression()
1 6 tabnine starter
Jupyter Server: Local Cell 6 of 32


File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > ds.dtypes
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline
Python 3.10.5 64-bit
lr=LogisticRegression()
lr.fit(x_train,y_train)
[27]
Python
/opt/conda/envs/Python-3.9/lib/python3.9/site-packages/sklearn/linear_model/_logistic.py:814: ConvergenceWarning: lbfgs failed to converge (status=1):
STOP: TOTAL NO. of ITERATIONS REACHED LIMIT.
Increase the number of iterations (max_iter) or scale the data as shown in:
https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression
n_iter_i = _check_optimize_result(
LogisticRegression()
y_pred1=lr.predict(x_test)
om sklearn.metrics import accuracy_score
lr=accuracy_score(y_test,y_pred1)
lr
[12]
Python
0.9176843057440073
import pickle
1 6 tabnine starter
Jupyter Server: Local Cell 6 of 32


File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > ds.dtypes
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline
Python 3.10.5 64-bit
import seaborn as sns
port matplotlib.pyplot as plt
[13]
Python
cm=confusion_matrix(y_test,y_pred1)
t.figure(figsize=(10,6))
sns.heatmap(cm, annot=True,cmap='winter',linewidths=0.3, linecolor='black',annot_kws={"size": 20})
TP=cm[0][0]
TN=cm[1][1]
FN=cm[1][0]
FP=cm[0][1]
#print(round(accuracy_score(prediction3,y_test)*100,2))
#print('Testing Accuracy for knn',(TP+TN)/(TP+TN+FN+FP))
print('Testing Sensitivity for logistic regression',(TP/(TP+FN)))
print('Testing Specificity for logistic regression',(TN/(TN+FP)))
print('Testing Precision for logistic regression',(TP/(TP+FP)))
print('Testing accuracy for logistic regression',accuracy_score(y_test,y_pred1))
[14]
Python
Testing Sensitivity for logistic regression 0.9279835390946503
Testing Specificity for logistic regression 0.9096045197740112
Testing Precision for logistic regression 0.8895463510848126
Testing accuracy for logistic regression 0.9176843057440073
1 6 tabnine starter
Jupyter Server: Local Cell 6 of 32


File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > x
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
9e+02
1.1e+02
70
1.1e+03
1000
800
600
400
200
0
1
!pip install -U ibm-watson-machine-learning
[15]
Python
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: urllib3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (1.26.7)
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 6 tabnine starter
Jupyter Server: Local Cell 8 of 32


File Edit Selection View Go Run Terminal Help
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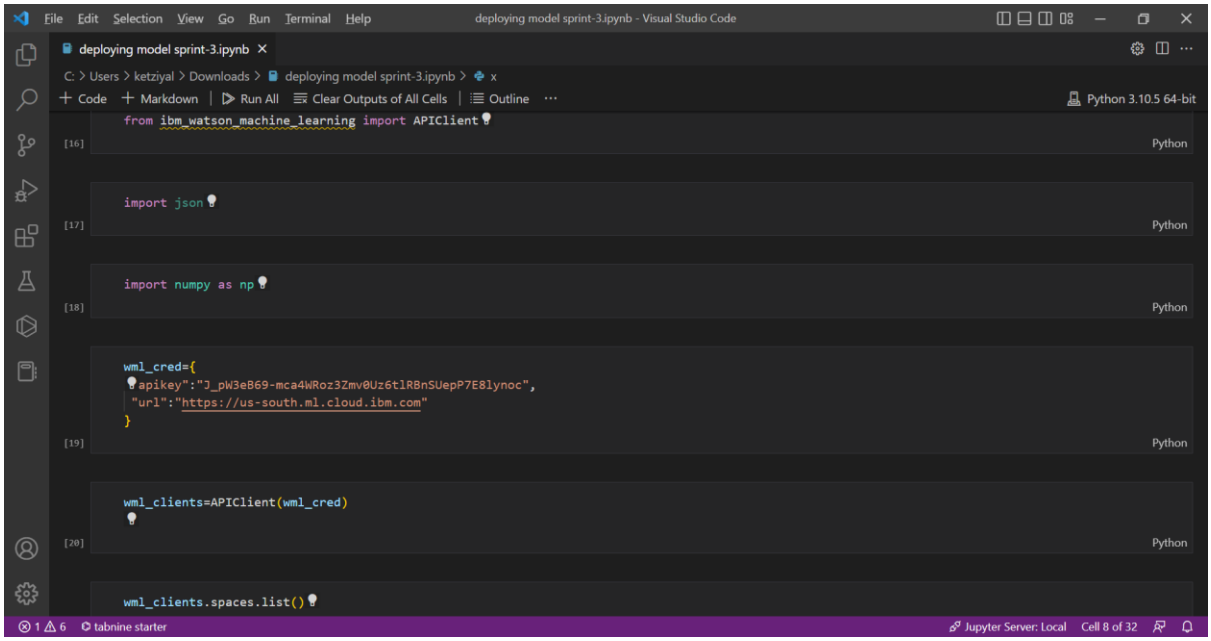
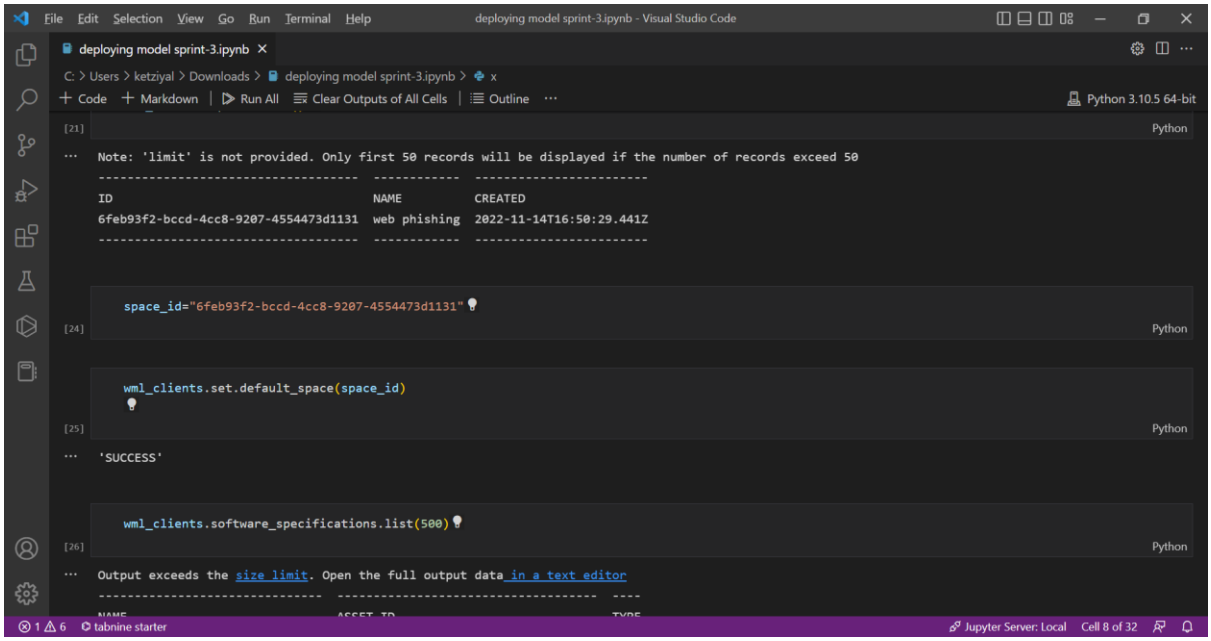
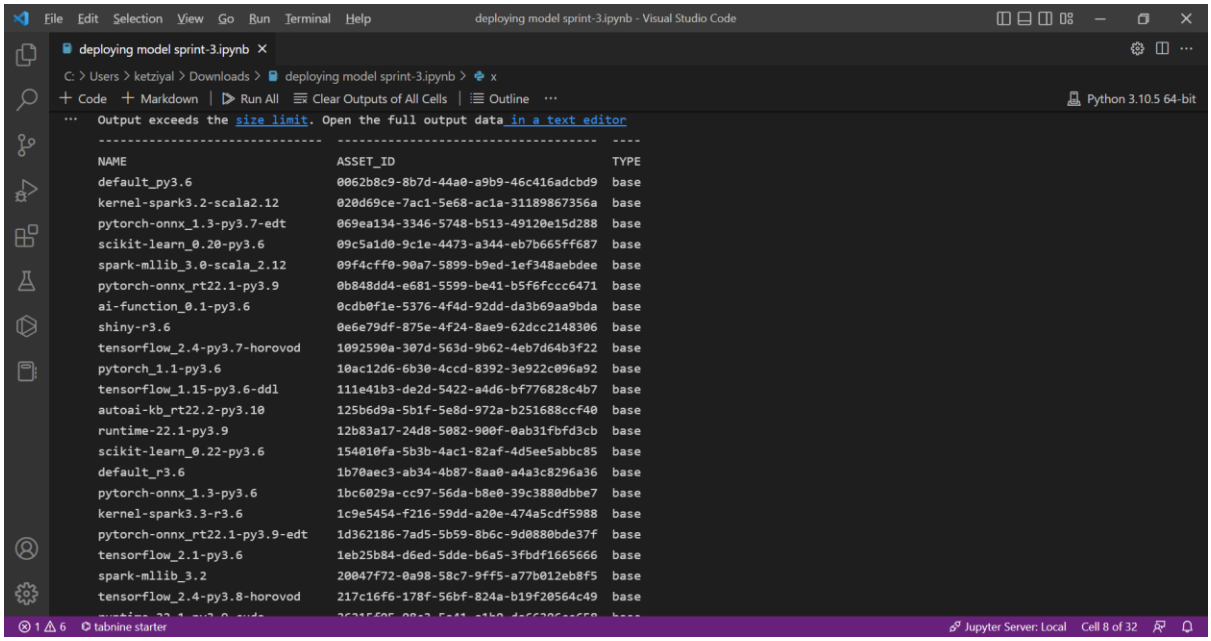
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > x
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
(2.11.0)
Requirement already satisfied: packaging in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from 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: requests in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (2.26.0)
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: 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: 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: 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: 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-cos-sdk==2.11.*->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-cos-sdk==2.11.*->ibm-watson-machine-learning) (1.15.0)
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: 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: zipp>=0.5 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from importlib-metadata->ibm-watson-machine-learning) (3.6.0)
1 6 tabnine starter
Jupyter Server: Local Cell 8 of 32


File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > x
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
from ibm_watson_machine_learning import APIClient
[16]
Python
import json
[17]
Python
import numpy as np
[18]
Python
wml_cred={
"apikey":"J_pW3eB69-mca4WRoz3Zmv0Uz6tlR8nSUepP7E8lynoc",
"url":"https://us-south.ml.cloud.ibm.com"
}
[19]
Python
wml_clients=APIClient(wml_cred)
[20]
Python
wml_clients.spaces.list()
1 6 tabnine starter
Jupyter Server: Local Cell 8 of 32


File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > x
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
[21]
Python
Note: 'limit' is not provided. Only first 50 records will be displayed if the number of records exceed 50
ID NAME CREATED
6feb93f2-bccd-4cc8-9207-4554473d1131 web phishing 2022-11-14T16:50:29.441Z
space_id="6feb93f2-bccd-4cc8-9207-4554473d1131"
[24]
Python
wml_clients.set.default_space(space_id)
[25]
Python
'SUCCESS'
wml_clients.software_specifications.list(500)
[26]
Python
Output exceeds the size limit. Open the full output data in a text editor
1 6 tabnine starter
Jupyter Server: Local Cell 8 of 32


File Edit Selection View Go Run Terminal Help
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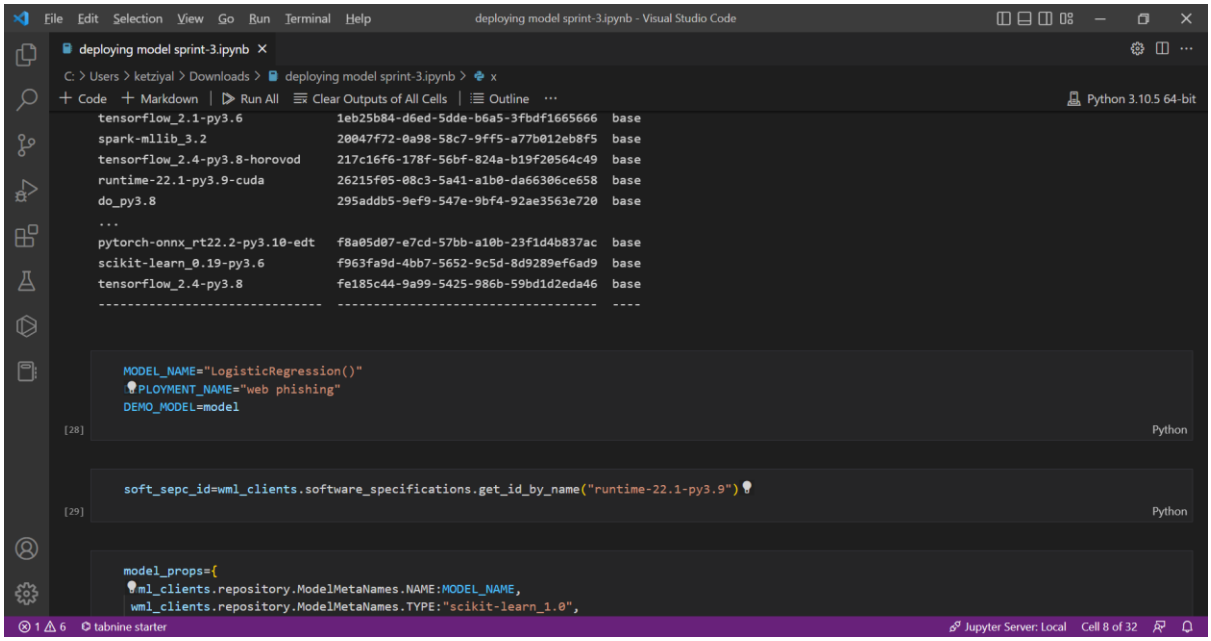
deploying model sprint-3.ipynb
C: > Users > ketziyal > Downloads > deploying model sprint-3.ipynb > x
+ Code + Markdown | Run All Clear Outputs of All Cells | Outline
Python 3.10.5 64-bit
Output exceeds the size limit. Open the full output data in a text editor
NAME ASSET_ID TYPE
default_py3.6 0062b8c9-8b7d-44a0-a9b9-46c416adcbd9 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-scala_2.12 09f4cff0-90a7-5899-b9ed-1ef348aebdee base
pytorch-onnx_rt22.1-py3.9 0b848dd4-e681-5599-be41-b5f6fccc6471 base
ai-function_0.1-py3.6 0cdb0f1e-5376-4f4d-92dd-da3b69aa9bda 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 10ac12d6-6b30-4ccd-8392-3e922c096a92 base
tensorflow_1.15-py3.6-ddl 111e41b3-de2d-5422-a4d6-bf776828c4b7 base
autoai-kb_rt22.2-py3.10 125b6d9a-5b1f-5e8d-972a-b251688ccf40 base
runtime-22.1-py3.9 12b83a17-24d8-5082-900f-0ab31fbfd3cb base
scikit-learn_0.22-py3.6 154010fa-5b3b-4ac1-82af-4d5ee5abbc85 base
default_r3.6 1b70aec3-ab34-4b87-8aa0-a4a3c8296a36 base
pytorch-onnx_1.3-py3.6 1bc6029a-cc97-56da-b8e0-39c3880dbbe7 base
kernel-spark3.3-r3.6 1c9e5454-f216-59dd-a20e-474a5cdf5988 base
pytorch-onnx_rt22.1-py3.9-edt 1d362186-7ad5-5b59-8b6c-9d0880bde37f base
tensorflow_2.1-py3.6 1eb25b84-d6ed-5dde-b6a5-3fbdf1665666 base
spark-mllib_3.2 20047f72-0a98-58c7-9ff5-a77b012eb8f5 base
tensorflow_2.4-py3.8-horovod 217c16f6-178f-56bf-824a-b19f20564c49 base
1 6 tabnine starter
Jupyter Server: Local Cell 8 of 32


File Edit Selection View Go Run Terminal Help
deploying model sprint-3.ipynb - Visual Studio Code
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+ Code + Markdown | Run All Clear Outputs of All Cells | Outline
Python 3.10.5 64-bit
tensorflow_2.1-py3.6 1eb25b84-d6ed-5dde-b6a5-3fbdf1665666 base
spark-mllib_3.2 20047f72-0a98-58c7-9ff5-a77b012eb8f5 base
tensorflow_2.4-py3.8-horovod 217c16f6-178f-56bf-824a-b19f20564c49 base
runtime-22.1-py3.9-cuda 26215f05-08c3-5a41-a1b0-da66306ce658 base
do_py3.8 295addb5-9ef9-547e-9bf4-92ae3563e720 base
...
pytorch-onnx_rt22.2-py3.10-edt f8a05d07-e7cd-57bb-a10b-23f1d4b837ac base
scikit-learn_0.19-py3.6 f963fa9d-4bb7-5652-9c5d-8d9289ef6ad9 base
tensorflow_2.4-py3.8 fe185c44-9a99-5425-986b-59bd1d2eda46 base
MODEL_NAME="LogisticRegression()"
PLOYMENT_NAME="web phishing"
DEMO_MODEL=model
[28] Python
soft_sepc_id=wml_clients.software_specifications.get_id_by_name("runtime-22.1-py3.9")
[29] Python
model_props={
ml_clients.repository.ModelMetaNames.NAME:MODEL_NAME,
wml_clients.repository.ModelMetaNames.TYPE:"scikit-learn_1.0",
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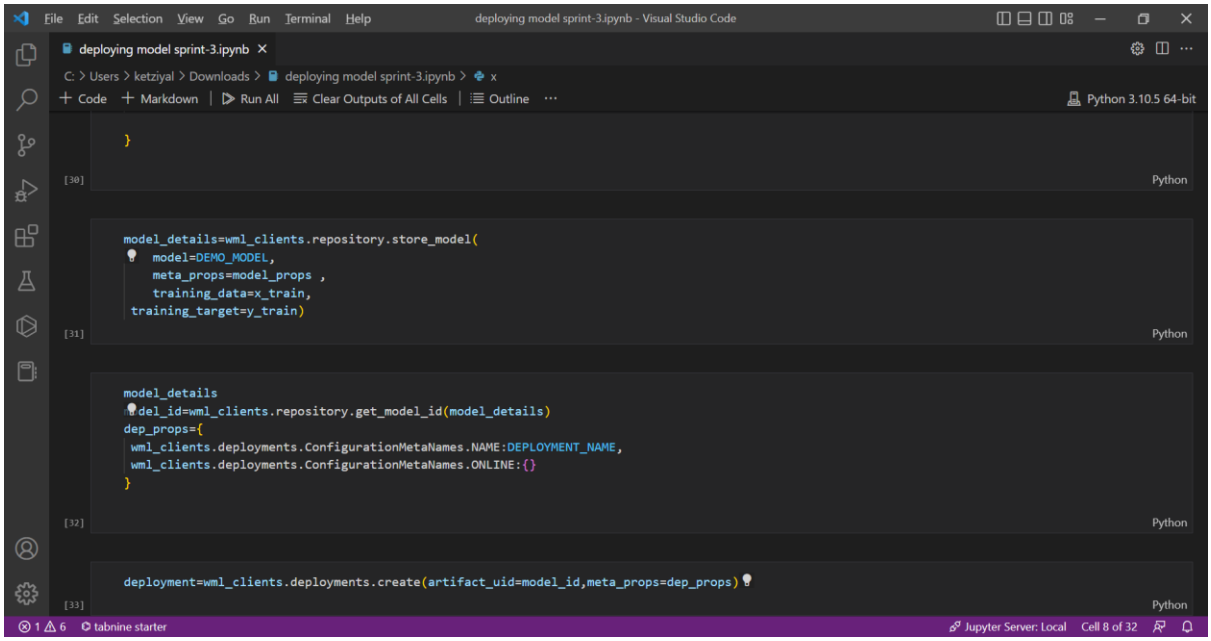
Jupyter Server: Local Cell 8 of 32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Python 3.10.5 64-bit
}
[30]
Python
model_details=wml_clients.repository.store_model(
model=DEMO_MODEL,
meta_props=model_props ,
training_data=x_train,
training_target=y_train)
[31]
Python
model_details
del_id=wml_clients.repository.get_model_id(model_details)
dep_props={
wml_clients.deployments.ConfigurationMetaNames.NAME:DEPLOYMENT_NAME,
wml_clients.deployments.ConfigurationMetaNames.ONLINE:{}
}
[32]
Python
deployment=wml_clients.deployments.create(artifact_uid=model_id,meta_props=dep_props)
[33]
Python
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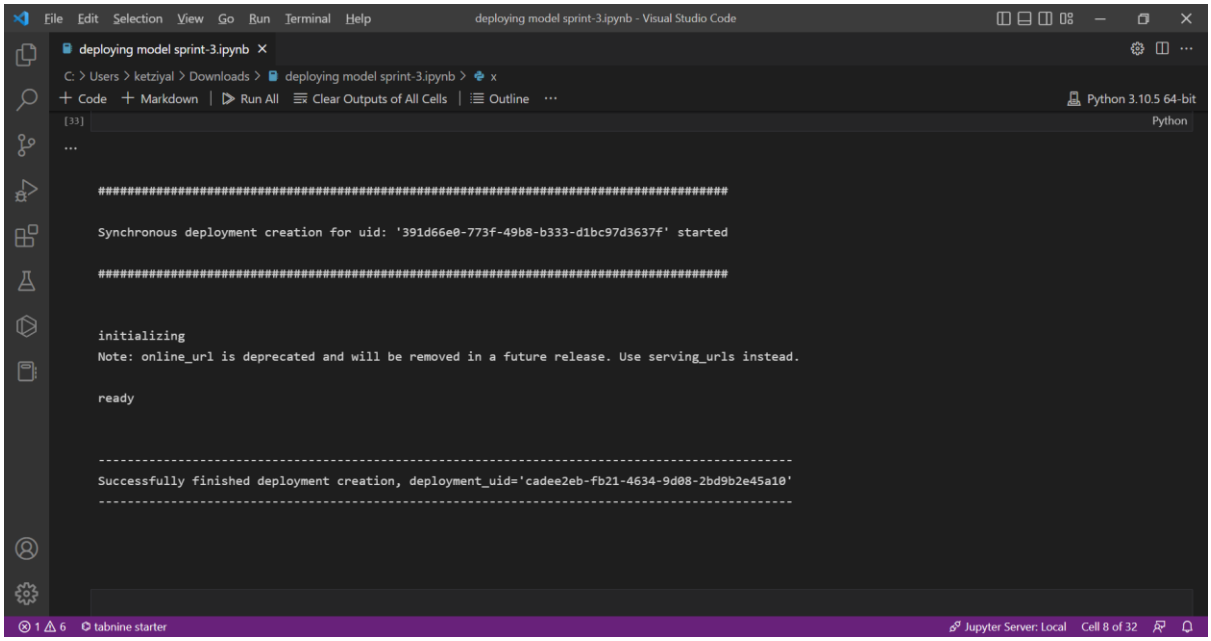
Jupyter Server: Local Cell 8 of 32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+ Code + Markdown | Run All Clear Outputs of All Cells | Outline ...
Python 3.10.5 64-bit
[33]
Python
...
##
Synchronous deployment creation for uid: '391d66e0-773f-49b8-b333-d1bc97d3637f' started
##
initializing
Note: online_url is deprecated and will be removed in a future release. Use serving_urls instead.
ready

Successfully finished deployment creation, deployment_uid='cadee2eb-fb21-4634-9d08-2bd9b2e45a10'
----
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