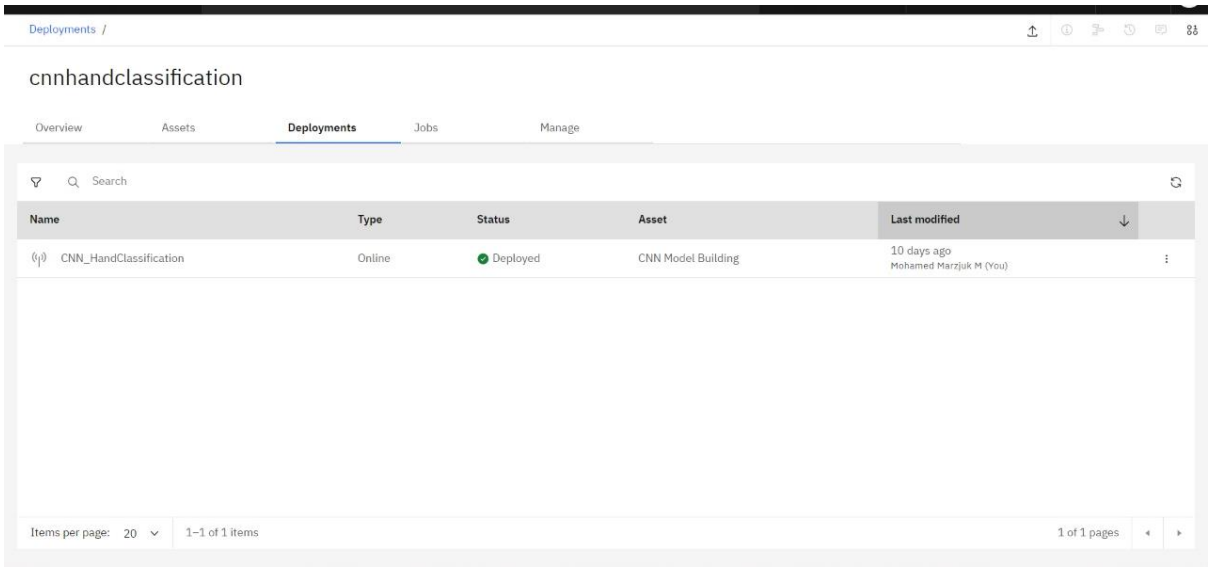
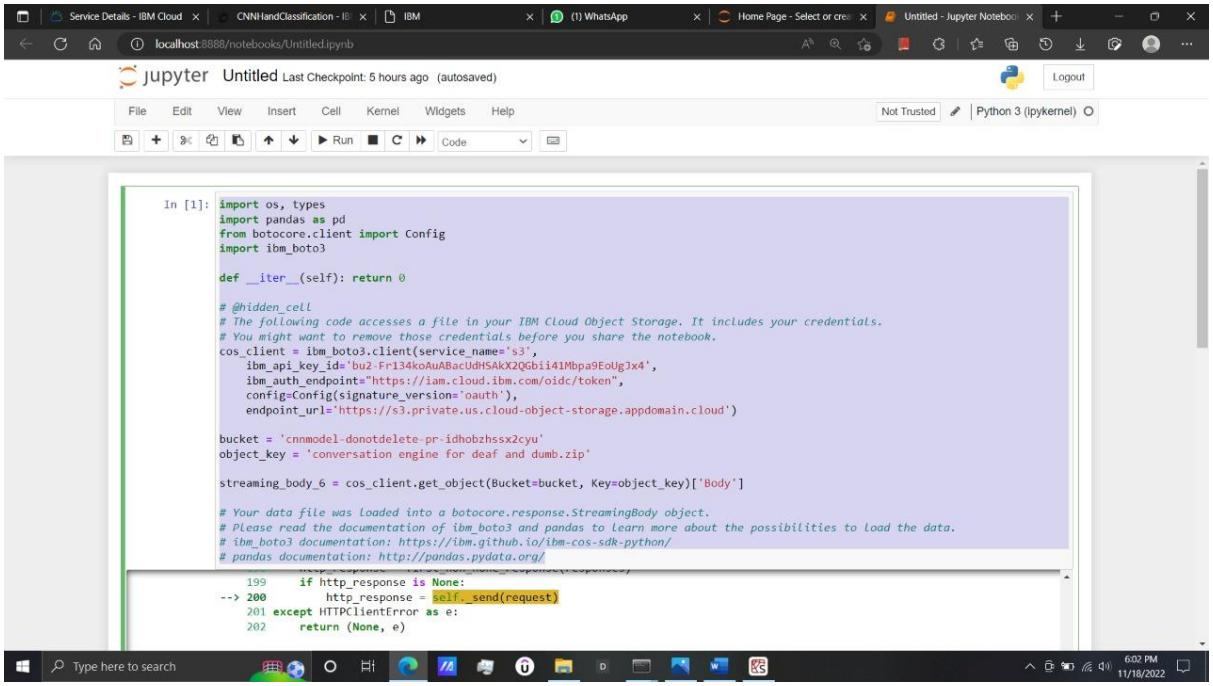
Sprint 3 (IBM CLOUD)

- IBM Cloud provides solutions that enable higher levels of compliance, security, and management, with proven architecture patterns and methods for rapid delivery for running mission-critical workloads.
- Creating IBM cloud id and service like Watson ,machie learning services and cloud storage
- Create notebook in Watson studio upload the dataset zip file into asset
- Creating an API key and creating new deployment space get the space id and set the space for deployment as default
- Storing the model and tar file and download that model which is used for application deployment purpose




Service Details - IBM Cloud
CNNHandClassification - IB
IBM
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Untitled - Jupyter Notebook
localhost:8888/notebooks/Untitled.ipynb
jupyter Untitled Last Checkpoint: 5 hours ago (autosaved)
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Not Trusted
Python 3 (ipykernel)
Run
Code
In [1]:
import os, types
import pandas as pd
from botocore.client import Config
import ibm_boto3
def __iter__(self): return 0
# @hidden_cell
# The following code accesses a file in your IBM Cloud Object Storage. It includes your credentials.
# You might want to remove those credentials before you share the notebook.
cos_client = ibm_boto3.client(service_name='s3',
ibm_api_key_id='bu2-Fr134koAuABacUdHSAkX2QGbii41Mbpa9EoUgJx4',
ibm_auth_endpoint="https://iam.cloud.ibm.com/oidc/token",
config=Config(signature_version='oauth'),
endpoint_url='https://s3.private.us.cloud-object-storage.appdomain.cloud')
bucket = 'cnnmodel-donotdelete-pr-idhobzhssx2cyu'
object_key = 'conversation engine for deaf and dumb.zip'
streaming_body_6 = cos_client.get_object(Bucket=bucket, Key=object_key)['Body']
# Your data file was loaded into a botocore.response.StreamingBody object.
# Please read the documentation of ibm_boto3 and pandas to learn more about the possibilities to load the data.
# ibm_boto3 documentation: https://ibm.github.io/ibm-cos-sdk-python/
# pandas documentation: http://pandas.pydata.org/
199 if http_response is None:
--> 200 http_response = self._send(request)
201 except HTTPClientError as e:
202 return (None, e)
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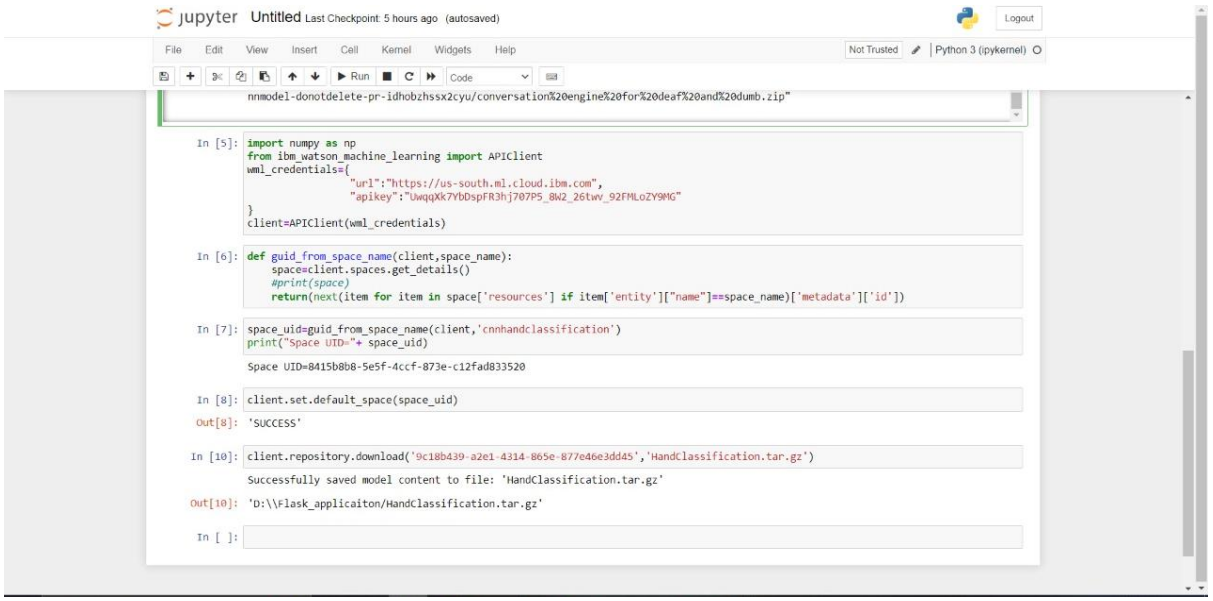
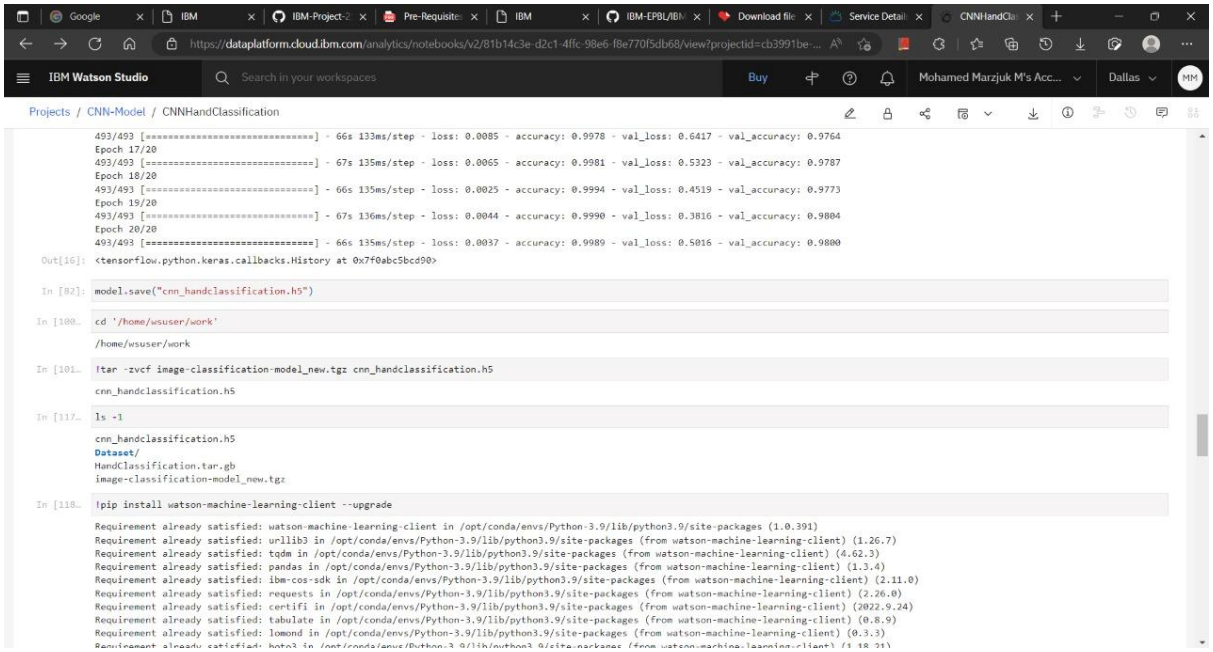

jupyter Untitled Last Checkpoint: 5 hours ago (autosaved)
Logout
File Edit View Insert Cell Kernel Widgets Help
Not Trusted
Python 3 (ipykernel)
Run
Code
nnmodel-donotdelete-pr-idhobzhssx2cyu/conversation%20engine%20for%20deaf%20and%20dumb.zip"
In [5]:
import numpy as np
from ibm_watson_machine_learning import APIClient
wml_credentials={
"url":"https://us-south.ml.cloud.ibm.com",
"apikey":"UwqqXk7YbDspFR3hj707P5_8W2_26twv_92FMLoZY9MG"
}
client=APIClient(wml_credentials)
In [6]:
def guid_from_space_name(client,space_name):
space=client.spaces.get_details()
#print(space)
return(next(item for item in space['resources'] if item['entity']["name"]==space_name)['metadata']['id'])
In [7]:
space_uid=guid_from_space_name(client,'cnnhandclassification')
print("Space UID="+ space_uid)
Space UID=8415b8b8-5e5f-4ccf-873e-c12fad833520
In [8]:
client.set.default_space(space_uid)
Out[8]:
'SUCCESS'
In [10]:
client.repository.download('9c18b439-a2e1-4314-865e-877e46e3dd45','HandClassification.tar.gz')
Successfully saved model content to file: 'HandClassification.tar.gz'
Out[10]:
'D:\\Flask_applicaiton/HandClassification.tar.gz'
In [ ]: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Projects / CNN-Model / CNNHandClassification
493/493 [==========] - 66s 133ms/step - loss: 0.0085 - accuracy: 0.9978 - val_loss: 0.6417 - val_accuracy: 0.9764
Epoch 17/20
493/493 [==========] - 67s 135ms/step - loss: 0.0065 - accuracy: 0.9981 - val_loss: 0.5323 - val_accuracy: 0.9787
Epoch 18/20
493/493 [==========] - 66s 135ms/step - loss: 0.0025 - accuracy: 0.9994 - val_loss: 0.4519 - val_accuracy: 0.9773
Epoch 19/20
493/493 [==========] - 67s 136ms/step - loss: 0.0044 - accuracy: 0.9990 - val_loss: 0.3816 - val_accuracy: 0.9804
Epoch 20/20
493/493 [==========] - 66s 135ms/step - loss: 0.0037 - accuracy: 0.9989 - val_loss: 0.5016 - val_accuracy: 0.9800
Out[16]: <tensorflow.python.keras.callbacks.History at 0x7f0abc5bcd90>
In [82]: model.save("cnn_handclassification.h5")
In [100...: cd '/home/wsuser/work'
/home/wsuser/work
In [101...: !tar -zvcf image-classification-model_new.tgz cnn_handclassification.h5
cnn_handclassification.h5
In [117...: ls -1
cnn_handclassification.h5
Dataset/
HandClassification.tar.gb
image-classification-model_new.tgz
In [118...: !pip install watson-machine-learning-client --upgrade
Requirement already satisfied: watson-machine-learning-client in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (1.0.391)
Requirement already satisfied: urllib3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from watson-machine-learning-client) (1.26.7)
Requirement already satisfied: tqdm in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from watson-machine-learning-client) (4.62.3)
Requirement already satisfied: pandas in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from watson-machine-learning-client) (1.3.4)
Requirement already satisfied: ibm-cos-sdk in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from watson-machine-learning-client) (2.11.0)
Requirement already satisfied: requests in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from watson-machine-learning-client) (2.26.0)
Requirement already satisfied: certifi in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from watson-machine-learning-client) (2022.9.24)
Requirement already satisfied: tabulate in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from watson-machine-learning-client) (0.8.9)
Requirement already satisfied: lomond in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from watson-machine-learning-client) (0.3.3)