

# Sprint-4

## Train The Model On IBM

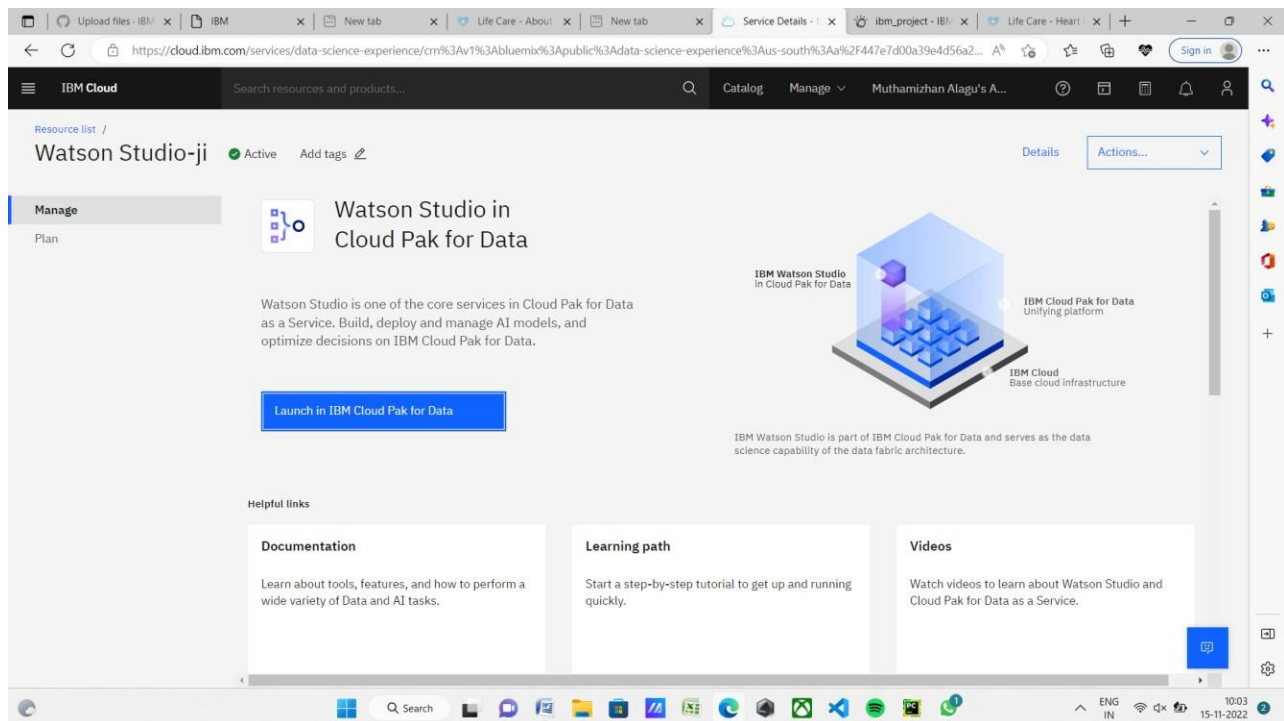
### Train The Model on IBM Watson

Date	15 Nov 2022
TeamID	PNT2022TMID25331
ProjectName	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation

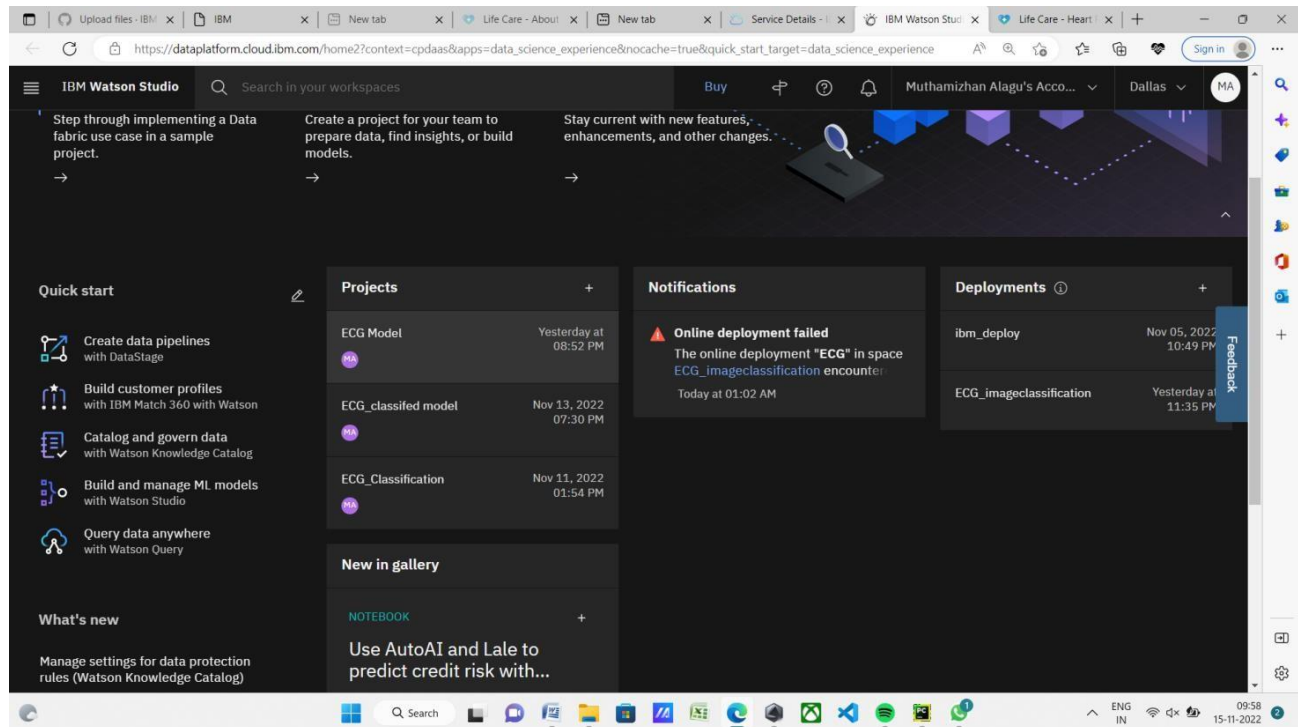
#### TASK:

Train The Model on IBM Watson:

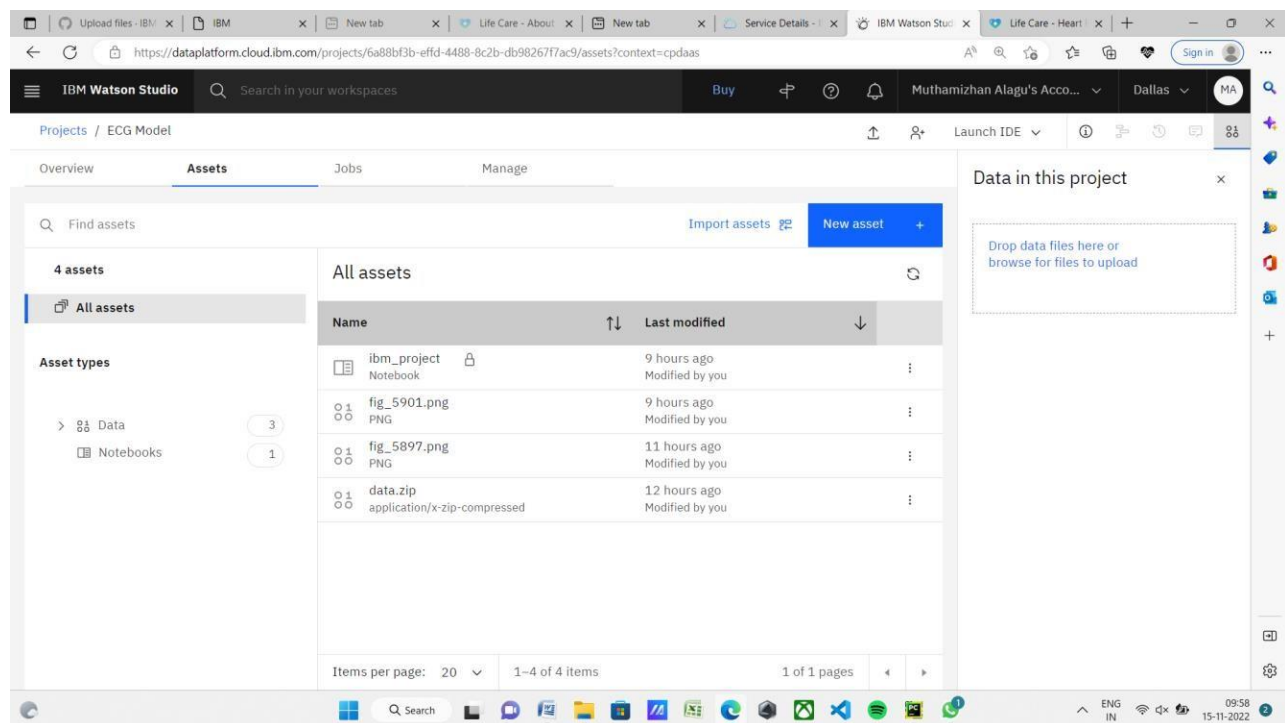
#### GO ON WATSON SERVICES(SCREEN SHOT):



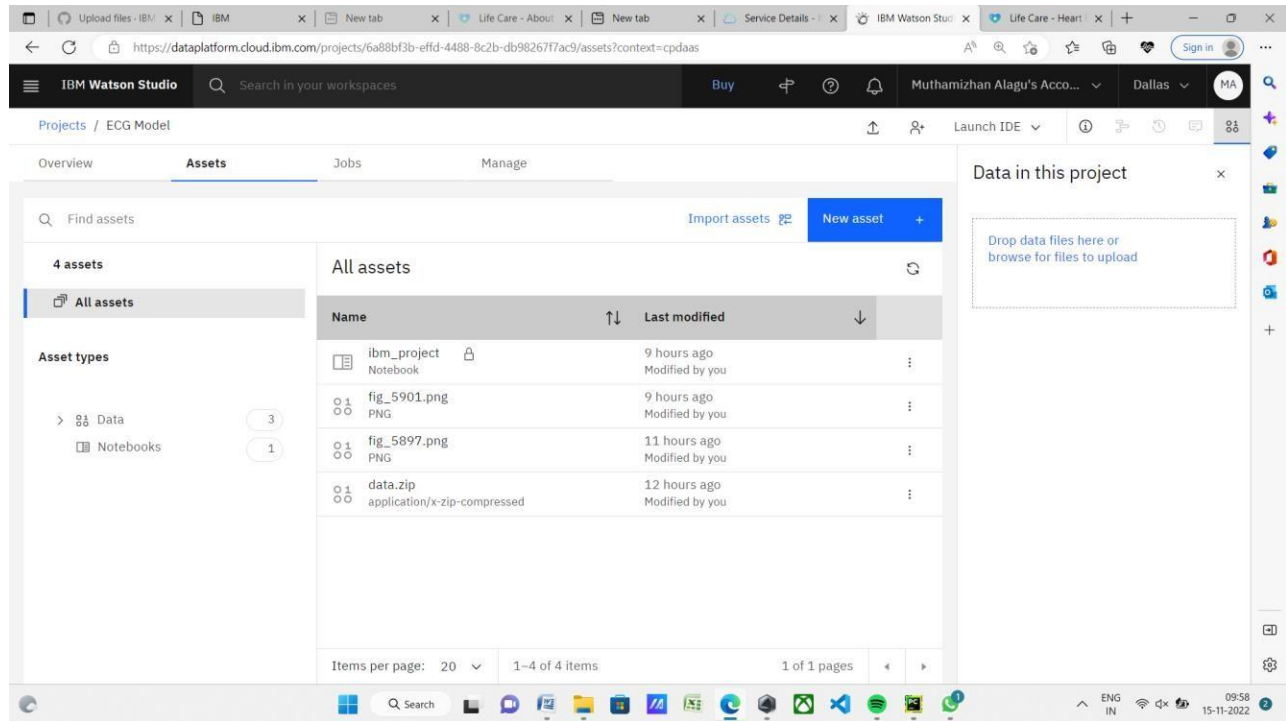
#### GO ON NEW PROJECT (SCREEN SHOT):



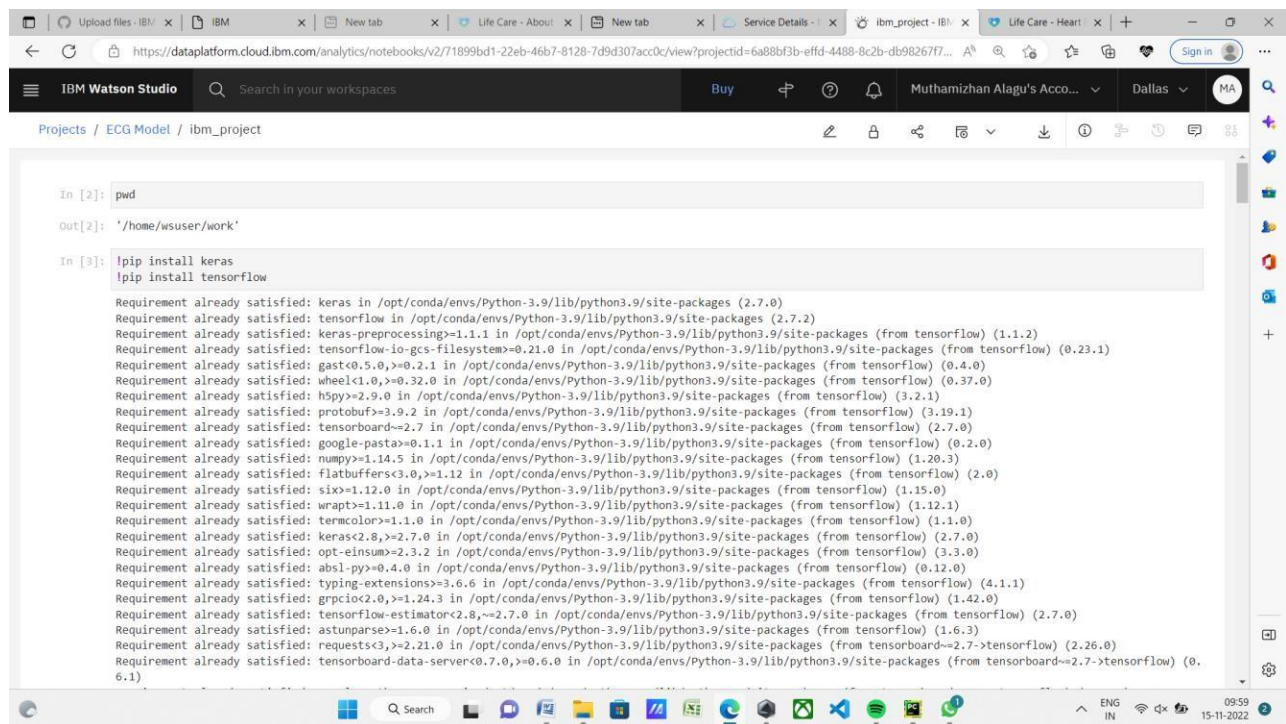
**GO ON ASSEST(SCREEN SHOT):**



**GO ON IBM\_PROJECT(SCREEN SHOT):**



## JUPYTER NOTEBOOK(SCREEN SHOT):



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In [8]: train_datagen = ImageDataGenerator(rescale = 1./255, shear_range = 0.2, zoom_range = 0.2, horizontal_flip = True)
test_datagen = ImageDataGenerator(rescale = 1./255)

In [25]: 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='8VA5EHF5GMF-ngEHTQW2IDllQd10uFj0rS4D5pCCZA',
    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 = 'ecgmodel-donotdelete-pr-nplmu2albo80rd'
object_key = 'data.zip'

streaming_body_1 = 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/

In [26]: from io import BytesIO
import zipfile
unzip=zipfile.ZipFile(BytesIO(streaming_body_1.read()), 'r')
file_names=unzip.namelist()
```

```
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https://dataplatform.cloud.ibm.com/analytics/notebooks/v2/71899bd1-22eb-46b7-8128-7d3d307acc0c/view?projectId=6a88bf3b-efid-4488-8c2b-db98267f7...
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requirement already satisfied: numpy==1.17.3 in /opt/conda/envs/python3.9/lib/python3.9/site-packages (from pandas->watson-machine-learning-client) (1.20.3)
Note: you may need to restart the kernel to use updated packages.

In [104]: # Replace the credentials that you got from watson machine learning service
from ibm_watson_machine_learning import APIClient
wml_credentials = {
    "url": "https://us-south.ml.cloud.ibm.com",
    "apikey": "T2vTAOHG5ty8qLPq-gE1lhROKw307DQ0N1m5SfSHd9M"
}
client = APIClient(wml_credentials)

In [105]: client = APIClient(wml_credentials)

In [106]: client.spaces.list()

Note: 'limit' is not provided. Only first 50 records will be displayed if the number of records exceed 50



| ID                                   | NAME                    | CREATED                  |
|--------------------------------------|-------------------------|--------------------------|
| a5359809-7795-48ec-aa02-5bdd98bc7c2b | ECG_imageclassification | 2022-11-14T17:43:44.414Z |
| aadd9634-6c96-4253-b644-512338430797 | ibm_deploy              | 2022-11-05T17:19:15.321Z |



In [107]: 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 [108]: space_uid = guid_from_space_name(client, 'ECG_imageclassification')
print("space UID = " + space_uid)

Space UID = a5359809-7795-48ec-aa02-5bdd98bc7c2b

In [109]: client.set.default_space(space_uid)

Out[109]: 'SUCCESS'
```