Sprint-4
Train The Model On IBM
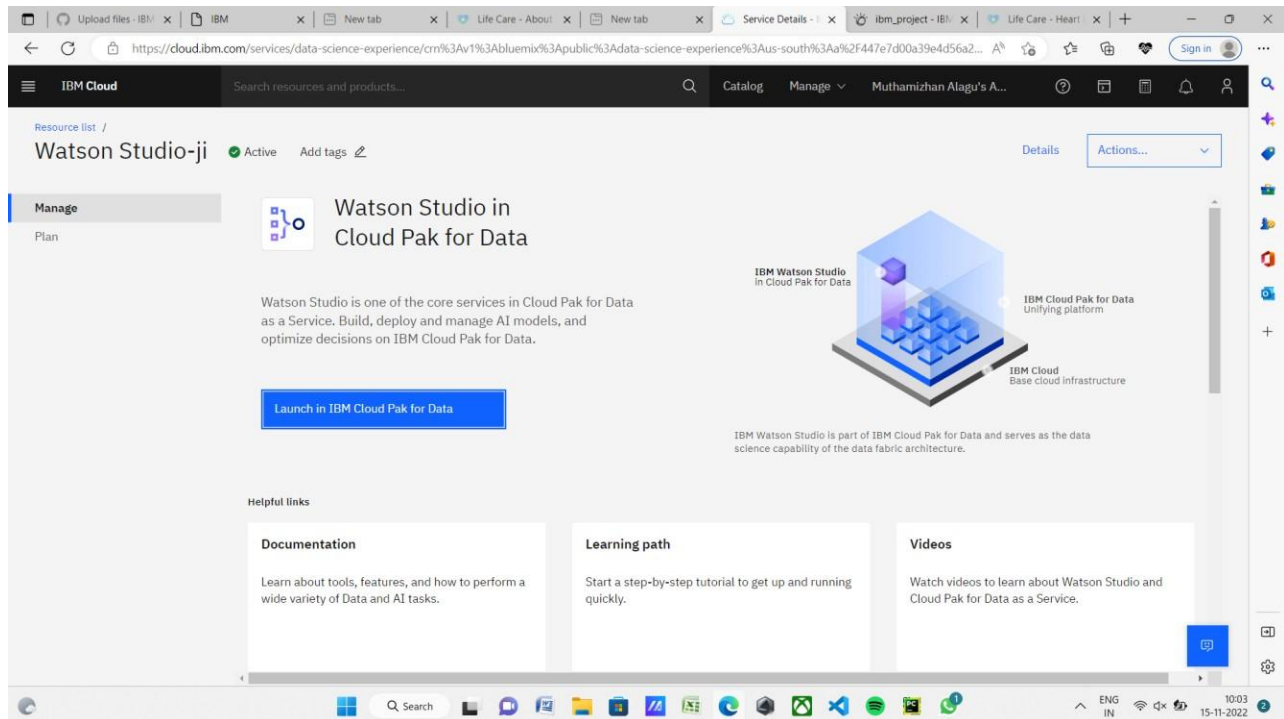
Train The Model on IBM Watson

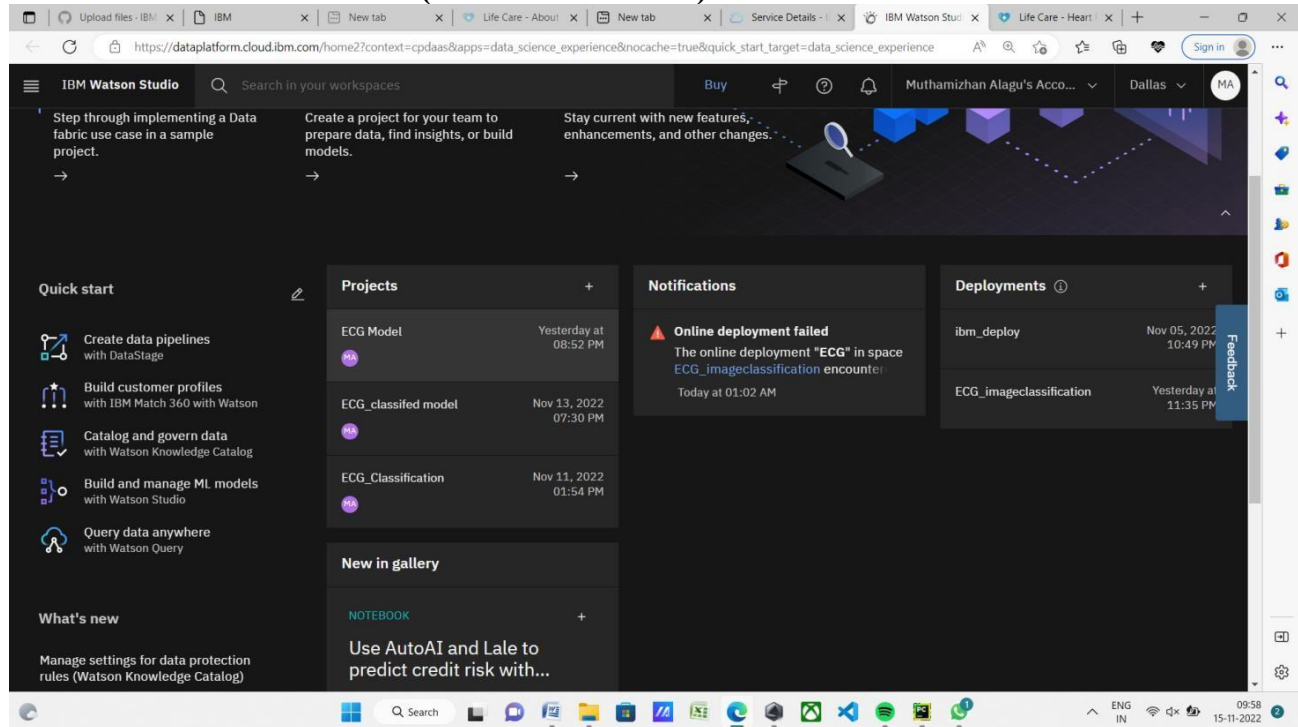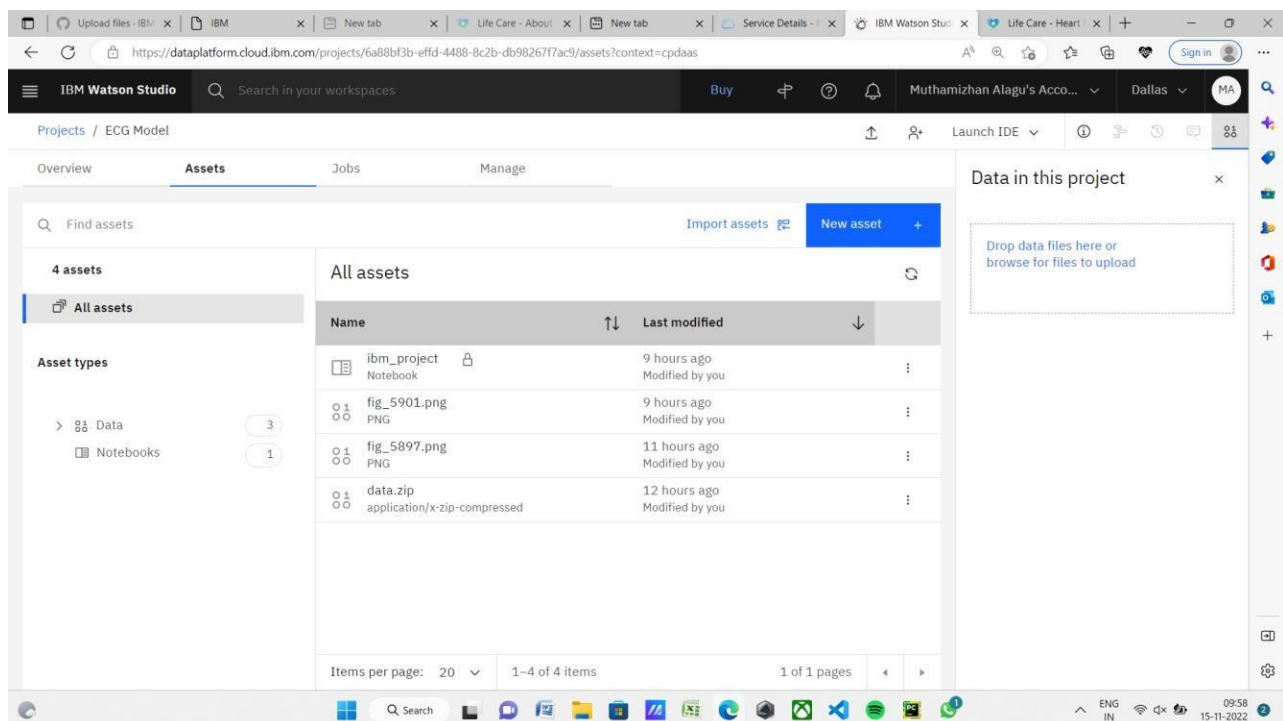| Date	15 Nov 2022
Team ID	PNT2022TMID44835
Project Name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation

TASK:

Train The Model on IBM Watson:
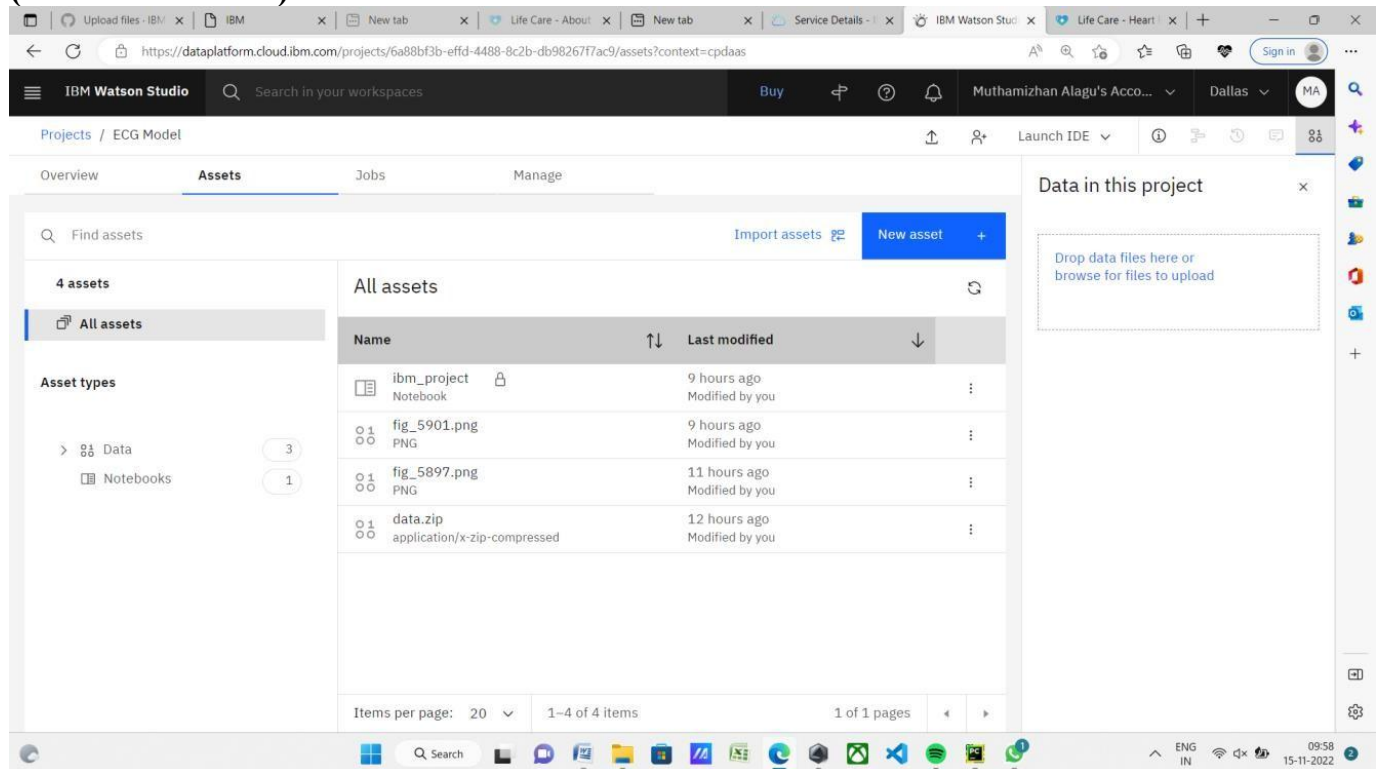
GO ON WATSON SERVICES (SCREEN SHOT):

GO ON NEW PROJECT (SCREEN SHOT):

GO ON ASSEST(SCREEN SHOT):

GO ON IBM_PROJECT (SCREENSHOT):

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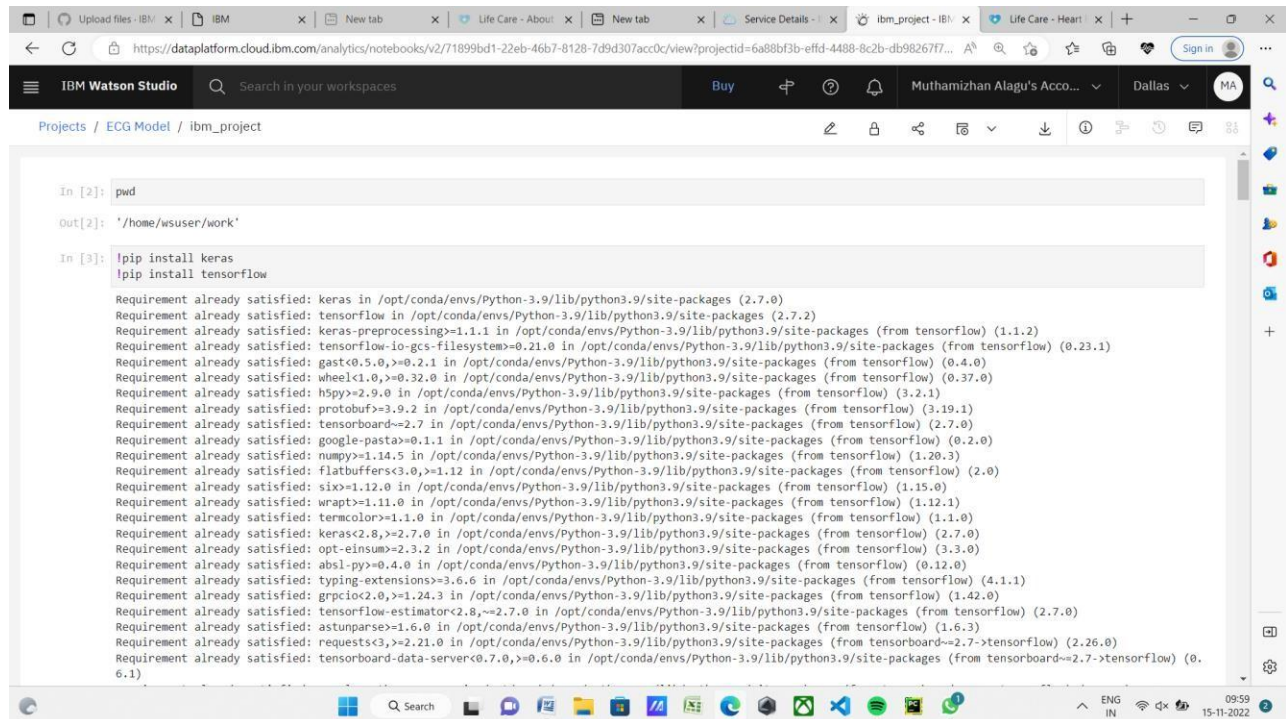
```
In [8]:  train_datagen = ImageDataGenerator(rescale = 1./255,shear_range = 0.2,zoom_range = 0.2,horizontal_flip = True)
         test_datagen = ImageDataGenerator(rescale = 1./255)
```

```
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='8VA5EhF5GMnF-ngEHtRQK2IDilQdI0ufj0r54D5pCCZA',
              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_paths=unzip_namelist()
```

```
Requirement already satisfied: numpy>=1.17.3 in /opt/conda/envs/Python-3.9/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":"T2vtAoHG5tyBqLPq-gE11hROKW307DoQN1m5SfSHdD9M"
                       }
           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
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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'
```