TEAM ID	PNT2022TMID45340
PROJECT NAME	Real-Time Communication System Powered by AI for Specially Abled

SAVING THE MODEL

```
In [ ]:    #saving the model
           model.save('realtime.h5')
```

```
In [ ]:    #converting to tar
           !tar  -zcvf realtime.tgz realtime.h5
```

realtime.h5

CLOUD DEPLOYMENT

```
In [ ]:    !pip install watson-machine-learning-client
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/
Collecting watson-machine-learning-client
  Downloading watson_machine_learning_client-1.0.391-py3-none-any.whl (
     |████████████████████████████████| 538 kB 7.3 MB/s
Requirement already satisfied: requests in /usr/local/lib/python3.7/dis
Collecting lomond
  Downloading lomond-0.3.3-py2.py3-none-any.whl (35 kB)
Requirement already satisfied: tabulate in /usr/local/lib/python3.7/dis
Requirement already satisfied: certifi in /usr/local/lib/python3.7/dist
Collecting boto3
  Downloading boto3-1.26.8-py3-none-any.whl (132 kB)
     |████████████████████████████████| 132 kB 39.8 MB/s
Requirement already satisfied: pandas in /usr/local/lib/python3.7/dist-
Requirement already satisfied: urllib3 in /usr/local/lib/python3.7/dist
Collecting ibm-cos-sdk
  Downloading ibm-cos-sdk-2.12.0.tar.gz (55 kB)
     |████████████████████████████████| 55 kB 4.8 MB/s
Requirement already satisfied: tqdm in /usr/local/lib/python3.7/dist-pa
Collecting s3transfer<0.7.0,>=0.6.0
  Downloading s3transfer-0.6.0-py3-none-any.whl (79 kB)
     |████████████████████████████████| 79 kB 9.2 MB/s
Collecting botocore<1.30.0,>=1.29.8
  Downloading botocore-1.29.8-py3-none-any.whl (9.9 MB)
     |████████████████████████████████| 9.9 MB 53.6 MB/s
Collecting jmespath<2.0.0,>=0.7.1
  Downloading jmespath-1.0.1-py3-none-any.whl (20 kB)
Requirement already satisfied: python-dateutil<3.0.0,>=2.1 in /usr/loca
ine-learning-client) (2.8.2)
Collecting urllib3
  Downloading urllib3-1.26.12-py2.py3-none-any.whl (140 kB)
     |████████████████████████████████| 140 kB 59.3 MB/s
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.7/dis
atson-machine-learning-client) (1.15.0)
Collecting ibm-cos-sdk-core==2.12.0
  Downloading ibm-cos-sdk-core-2.12.0.tar.gz (956 kB)
```

ac3c132633f3f52496ee0df122daa56
    Stored in directory: /root/.cache/pip/wheels/57/79/6a/ffe3370ed7ebc00
Successfully built ibm-cos-sdk ibm-cos-sdk-core ibm-cos-sdk-s3transfer
Installing collected packages: urllib3, requests, jmespath, ibm-cos-sdk
watson-machine-learning-client
  Attempting uninstall: urllib3
    Found existing installation: urllib3 1.24.3
    Uninstalling urllib3-1.24.3:
      Successfully uninstalled urllib3-1.24.3
  Attempting uninstall: requests
    Found existing installation: requests 2.23.0
    Uninstalling requests-2.23.0:
      Successfully uninstalled requests-2.23.0
Successfully installed boto3-1.26.8 botocore-1.29.8 ibm-cos-sdk-2.12.0
3.3 requests-2.28.1 s3transfer-0.6.0 urllib3-1.26.12 watson-machine-lea

In [ ]:
```
!pip install ibm_watson_machine_learning
```

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/
Collecting ibm_watson_machine_learning
  Downloading ibm_watson_machine_learning-1.0.257-py3-none-any.whl (1.8
  |████████████████████████████████| 1.8 MB 6.3 MB/s
Requirement already satisfied: packaging in /usr/local/lib/python3.7/di
Requirement already satisfied: urllib3 in /usr/local/lib/python3.7/dist
Requirement already satisfied: certifi in /usr/local/lib/python3.7/dist
Requirement already satisfied: importlib-metadata in /usr/local/lib/pyt
Requirement already satisfied: lomond in /usr/local/lib/python3.7/dist-
Requirement already satisfied: requests in /usr/local/lib/python3.7/dis
Collecting ibm-cos-sdk==2.7.*
  Downloading ibm-cos-sdk-2.7.0.tar.gz (51 kB)
  |████████████████████████████████| 51 kB 902 kB/s
Requirement already satisfied: tabulate in /usr/local/lib/python3.7/dis
Requirement already satisfied: pandas<1.5.0,>=0.24.2 in /usr/local/lib/
Collecting ibm-cos-sdk-core==2.7.0
  Downloading ibm-cos-sdk-core-2.7.0.tar.gz (824 kB)
  |████████████████████████████████| 824 kB 50.2 MB/s
Collecting ibm-cos-sdk-s3transfer==2.7.0
  Downloading ibm-cos-sdk-s3transfer-2.7.0.tar.gz (133 kB)
  |████████████████████████████████| 133 kB 57.0 MB/s
Requirement already satisfied: jmespath<1.0.0,>=0.7.1 in /usr/local/lib
(0.10.0)
Collecting docutils<0.16,>=0.10
  Downloading docutils-0.15.2-py3-none-any.whl (547 kB)
  |████████████████████████████████| 547 kB 48.1 MB/s
Requirement already satisfied: python-dateutil<3.0.0,>=2.1 in /usr/loca
>ibm_watson_machine_learning) (2.8.2)
Requirement already satisfied: pytz>=2017.3 in /usr/local/lib/python3.7
6)
Requirement already satisfied: numpy>=1.17.3 in /usr/local/lib/python3.
6)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.7/dis
dk==2.7.*->ibm_watson_machine_learning) (1.15.0)
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.7
Requirement already satisfied: charset-normalizer<3,>=2 in /usr/local/l
Requirement already satisfied: typing-extensions>=3.6.4 in /usr/local/l
g) (4.1.1)
Requirement already satisfied: zipp>=0.5 in /usr/local/lib/python3.7/di
Requirement already satisfied: pyparsing!=3.0.5,>=2.0.2 in /usr/local/l
Building wheels for collected packages: ibm-cos-sdk, ibm-cos-sdk-core,
  Building wheel for ibm-cos-sdk (setup.py) ... done
  Created wheel for ibm-cos-sdk: filename=ibm_cos_sdk-2.7.0-py2.py3-non
8863e97fcf8c
    Stored in directory: /root/.cache/pip/wheels/47/22/bf/e1154ff0f5de93c
  Building wheel for ibm-cos-sdk-core (setup.py) ... done
  Created wheel for ibm-cos-sdk-core: filename=ibm_cos_sdk_core-2.7.0-p
de90178014432a4d0dbbd1c
    Stored in directory: /root/.cache/pip/wheels/6c/a2/e4/c16d02f809a3ea9
  Building wheel for ibm-cos-sdk-s3transfer (setup.py) ... done
  Created wheel for ibm-cos-sdk-s3transfer: filename=ibm_cos_sdk_s3tran
8db0735b07a5f7c505365cbdb0f8cb74be
    Stored in directory: /root/.cache/pip/wheels/5f/b7/14/fbe02bc1ef1af89
Successfully built ibm-cos-sdk ibm-cos-sdk-core ibm-cos-sdk-s3transfer
Installing collected packages: docutils, ibm-cos-sdk-core, ibm-cos-sdk-
  Attempting uninstall: docutils
    Found existing installation: docutils 0.17.1
    Uninstalling docutils-0.17.1:
      Successfully uninstalled docutils-0.17.1
  Attempting uninstall: ibm-cos-sdk-core
    Found existing installation: ibm-cos-sdk-core 2.12.0
    Uninstalling ibm-cos-sdk-core-2.12.0:
      Successfully uninstalled ibm-cos-sdk-core-2.12.0
  Attempting uninstall: ibm-cos-sdk-s3transfer
    Found existing installation: ibm-cos-sdk-s3transfer 2.12.0
    Uninstalling ibm-cos-sdk-s3transfer-2.12.0:
      Successfully uninstalled ibm-cos-sdk-s3transfer-2.12.0
  Attempting uninstall: ibm-cos-sdk
    Found existing installation: ibm-cos-sdk 2.12.0
    Uninstalling ibm-cos-sdk-2.12.0:
      Successfully uninstalled ibm-cos-sdk-2.12.0
Successfully installed docutils-0.15.2 ibm-cos-sdk-2.7.0 ibm-cos-sdk-co

In [ ]:
```
from ibm_watson_machine_learning import APIClient

cloud_credentials={
    "url":"https://eu-gb.ml.cloud.ibm.com",
    "apikey":"JjbZw3a4R8S9m1hkHRzyhox5pPW_l5Cc39WxdpFYy_eA"
}

client=APIClient(cloud_credentials)
```

Python 3.7 and 3.8 frameworks are deprecated and will be removed in a f

In [ ]:
```
client.spaces.get_details()
```

Out[ ]: {'resources': [{'entity': {'compute': [{'crn': 'crn:v1:bluemix:public:p