



In [1]:

```
1 !pip install watson-machine-learning-client
```

Looking in indexes: <https://pypi.org/simple>, (<https://pypi.org/simple>,) <https://us-python.pkg.dev/colab-wheels/public/simple/> (<https://us-python.pkg.dev/colab-wheels/public/simple/>)

Collecting watson-machine-learning-client

Downloading watson\_machine\_learning\_client-1.0.391-py3-none-any.whl (538 kB)

|██| 538 kB 5.4 MB/s

Collecting ibm-cos-sdk

Downloading ibm-cos-sdk-2.12.0.tar.gz (55 kB)

|██| 55 kB 4.3 MB/s

Collecting lomond

Downloading lomond-0.3.3-py2.py3-none-any.whl (35 kB)

Requirement already satisfied: pandas in /usr/local/lib/python3.7/dist-packages (from watson-machine-learning-client) (1.3.5)

Requirement already satisfied: urllib3 in /usr/local/lib/python3.7/dist-packages (from watson-machine-learning-client) (1.24.3)

Requirement already satisfied: requests in /usr/local/lib/python3.7/dist-packages (from watson-machine-learning-client) (2.23.0)

Requirement already satisfied: tabulate in /usr/local/lib/python3.7/dist-packages (from watson-machine-learning-client) (0.8.10)

Requirement already satisfied: certifi in /usr/local/lib/python3.7/dist-packages (from watson-machine-learning-client) (2022.9.24)

Collecting boto3

Downloading boto3-1.26.8-py3-none-any.whl (132 kB)

|██| 132 kB 48.3 MB/s

Requirement already satisfied: tqdm in /usr/local/lib/python3.7/dist-packages (from watson-machine-learning-client) (4.64.1)

Collecting jmespath<2.0.0,>=0.7.1

Downloading jmespath-1.0.1-py3-none-any.whl (20 kB)

Collecting botocore<1.30.0,>=1.29.8

Downloading botocore-1.29.8-py3-none-any.whl (9.9 MB)

|██| 9.9 MB 46.6 MB/s

Collecting s3transfer<0.7.0,>=0.6.0

Downloading s3transfer-0.6.0-py3-none-any.whl (79 kB)

|██| 79 kB 8.5 MB/s

Collecting urllib3

Downloading urllib3-1.26.12-py2.py3-none-any.whl (140 kB)

|██| 140 kB 46.6 MB/s

Requirement already satisfied: python-dateutil<3.0.0,>=2.1 in /usr/local/lib/python3.7/dist-packages (from botocore<1.30.0,>=1.29.8->boto3->watson-machine-learning-client) (2.8.2)

Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.7/dist-packages (from python-dateutil<3.0.0,>=2.1->botocore<1.30.0,>=1.29.8->boto3->watson-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)

|██| 956 kB 63.5 MB/s

Collecting ibm-cos-sdk-s3transfer==2.12.0

Downloading ibm-cos-sdk-s3transfer-2.12.0.tar.gz (135 kB)

|██| 135 kB 53.6 MB/s

Collecting jmespath<2.0.0,>=0.7.1

Downloading jmespath-0.10.0-py2.py3-none-any.whl (24 kB)

Collecting requests

Downloading requests-2.28.1-py3-none-any.whl (62 kB)

|██| 62 kB 1.3 MB/s

Requirement already satisfied: charset-normalizer<3,>=2 in /usr/local/lib/python3.7/dist-packages (from requests->watson-machine-learning-client) (2.1.

1)  
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.7/dist-packages (from requests->watson-machine-learning-client) (2.10)  
Requirement already satisfied: numpy>=1.17.3 in /usr/local/lib/python3.7/dist-packages (from pandas->watson-machine-learning-client) (1.21.6)  
Requirement already satisfied: pytz>=2017.3 in /usr/local/lib/python3.7/dist-packages (from pandas->watson-machine-learning-client) (2022.6)  
Building wheels for collected packages: ibm-cos-sdk, ibm-cos-sdk-core, ibm-cos-sdk-s3transfer  
Building wheel for ibm-cos-sdk (setup.py) ... done  
Created wheel for ibm-cos-sdk: filename=ibm\_cos\_sdk-2.12.0-py3-none-any.whl size=73931 sha256=fd99cd811c8163350fe88c63c9b36c5f7ee6eeffbf4d2e1f3c72306cbc46812b  
Stored in directory: /root/.cache/pip/wheels/ec/94/29/2b57327cf00664b6614304f7958abd29d77ea0e5bbece2ea57  
Building wheel for ibm-cos-sdk-core (setup.py) ... done  
Created wheel for ibm-cos-sdk-core: filename=ibm\_cos\_sdk\_core-2.12.0-py3-none-any.whl size=562962 sha256=325d750ae21cb064b3c1ddee6b4003e5d0aa540903cc73732a0d62078f5f1510  
Stored in directory: /root/.cache/pip/wheels/64/56/fb/5cd6f4f40406c828a5289b95b2752a4d142a9afb359244ed8d  
Building wheel for ibm-cos-sdk-s3transfer (setup.py) ... done  
Created wheel for ibm-cos-sdk-s3transfer: filename=ibm\_cos\_sdk\_s3transfer-2.12.0-py3-none-any.whl size=89778 sha256=5e3968ec5c9cb9a74bd702feed22bc51d136fd2cc6a983cdf758b97e7df5d637  
Stored in directory: /root/.cache/pip/wheels/57/79/6a/ffe3370ed7ebc00604f9f76766e1e0348dcdcad2b2e32df9e1  
Successfully built ibm-cos-sdk ibm-cos-sdk-core ibm-cos-sdk-s3transfer  
Installing collected packages: urllib3, requests, jmespath, ibm-cos-sdk-core, botocore, s3transfer, ibm-cos-sdk-s3transfer, lomond, ibm-cos-sdk, boto3, 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 ibm-cos-sdk-core-2.12.0 ibm-cos-sdk-s3transfer-2.12.0 jmespath-0.10.0 lomond-0.3.3 requests-2.28.1 s3transfer-0.6.0 urllib3-1.26.12 watson-machine-learning-client-1.0.391

In [2]:

```
1 !pip install ibm_watson_machine_learning
```

Looking in indexes: <https://pypi.org/simple>, (<https://pypi.org/simple>,) <https://us-python.pkg.dev/colab-wheels/public/simple/> (<https://us-python.pkg.dev/colab-wheels/public/simple/>)

Collecting ibm\_watson\_machine\_learning

Downloading ibm\_watson\_machine\_learning-1.0.257-py3-none-any.whl (1.8 MB)

|██| 1.8 MB 5.3 MB/s

Requirement already satisfied: packaging in /usr/local/lib/python3.7/dist-packages (from ibm\_watson\_machine\_learning) (21.3)

Requirement already satisfied: lomond in /usr/local/lib/python3.7/dist-packages (from ibm\_watson\_machine\_learning) (0.3.3)

Requirement already satisfied: certifi in /usr/local/lib/python3.7/dist-packages (from ibm\_watson\_machine\_learning) (2022.9.24)

Requirement already satisfied: urllib3 in /usr/local/lib/python3.7/dist-packages (from ibm\_watson\_machine\_learning) (1.26.12)

Requirement already satisfied: importlib-metadata in /usr/local/lib/python3.7/dist-packages (from ibm\_watson\_machine\_learning) (4.13.0)

Requirement already satisfied: requests in /usr/local/lib/python3.7/dist-packages (from ibm\_watson\_machine\_learning) (2.28.1)

Requirement already satisfied: tabulate in /usr/local/lib/python3.7/dist-packages (from ibm\_watson\_machine\_learning) (0.8.10)

Requirement already satisfied: pandas<1.5.0,>=0.24.2 in /usr/local/lib/python3.7/dist-packages (from ibm\_watson\_machine\_learning) (1.3.5)

Collecting ibm-cos-sdk==2.7.\*

Downloading ibm-cos-sdk-2.7.0.tar.gz (51 kB)

|██| 51 kB 775 kB/s

Collecting ibm-cos-sdk-core==2.7.0

Downloading ibm-cos-sdk-core-2.7.0.tar.gz (824 kB)

|██| 824 kB 46.5 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/python3.7/dist-packages (from ibm-cos-sdk==2.7.\*->ibm\_watson\_machine\_learning) (0.10.0)

Collecting docutils<0.16,>=0.10

Downloading docutils-0.15.2-py3-none-any.whl (547 kB)

|██| 547 kB 46.5 MB/s

Requirement already satisfied: python-dateutil<3.0.0,>=2.1 in /usr/local/lib/python3.7/dist-packages (from ibm-cos-sdk-core==2.7.0->ibm-cos-sdk==2.7.\*->ibm\_watson\_machine\_learning) (2.8.2)

Requirement already satisfied: pytz>=2017.3 in /usr/local/lib/python3.7/dist-packages (from pandas<1.5.0,>=0.24.2->ibm\_watson\_machine\_learning) (2022.6)

Requirement already satisfied: numpy>=1.17.3 in /usr/local/lib/python3.7/dist-packages (from pandas<1.5.0,>=0.24.2->ibm\_watson\_machine\_learning) (1.21.6)

Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.7/dist-packages (from python-dateutil<3.0.0,>=2.1->ibm-cos-sdk-core==2.7.0->ibm-cos-sdk==2.7.\*->ibm\_watson\_machine\_learning) (1.15.0)

Requirement already satisfied: charset-normalizer<3,>=2 in /usr/local/lib/python3.7/dist-packages (from requests->ibm\_watson\_machine\_learning) (2.1.1)

Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.7/dist-packages (from requests->ibm\_watson\_machine\_learning) (2.10)

Requirement already satisfied: typing-extensions>=3.6.4 in /usr/local/lib/python3.7/dist-packages (from importlib-metadata->ibm\_watson\_machine\_learning) (4.1.1)

Requirement already satisfied: zipp>=0.5 in /usr/local/lib/python3.7/dist-packages (from importlib-metadata->ibm\_watson\_machine\_learning) (3.10.0)

Requirement already satisfied: pyparsing!=3.0.5,>=2.0.2 in /usr/local/lib/python3.7/dist-packages (from packaging->ibm\_watson\_machine\_learning) (3.0.9)  
Building wheels for collected packages: ibm-cos-sdk, ibm-cos-sdk-core, ibm-cos-sdk-s3transfer  
Building wheel for ibm-cos-sdk (setup.py) ... done  
Created wheel for ibm-cos-sdk: filename=ibm\_cos\_sdk-2.7.0-py2.py3-none-any.whl size=72563 sha256=8fa8a716a7ce1699fa2be56aef84a4b72ab53b9a4a019366a9a81e1067979ca0  
Stored in directory: /root/.cache/pip/wheels/47/22/bf/e1154ff0f5de93cc477acd0ca69abfbb8b799c5b28a66b44c2  
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-py2.py3-none-any.whl size=501013 sha256=e8e33ba87f1a77d8a7965ccf60db593d60ace85d61e0c407002bcf1401530de6  
Stored in directory: /root/.cache/pip/wheels/6c/a2/e4/c16d02f809a3ea998e17cfd02c13369281f3d232aaf5902c19  
Building wheel for ibm-cos-sdk-s3transfer (setup.py) ... done  
Created wheel for ibm-cos-sdk-s3transfer: filename=ibm\_cos\_sdk\_s3transfer-2.7.0-py2.py3-none-any.whl size=88622 sha256=99f90375ad35e66615972b8e85ff5a5d518371450f7d5f18074b24f7c3535433  
Stored in directory: /root/.cache/pip/wheels/5f/b7/14/fbe02bc1ef1af890650c7e51743d1c83890852e598d164b9da  
Successfully built ibm-cos-sdk ibm-cos-sdk-core ibm-cos-sdk-s3transfer  
Installing collected packages: docutils, ibm-cos-sdk-core, ibm-cos-sdk-s3transfer, ibm-cos-sdk, ibm-watson-machine-learning  
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-core-2.7.0 ibm-cos-sdk-s3transfer-2.7.0 ibm-watson-machine-learning-1.0.257

In [3]:

```
1 from ibm_watson_machine_learning import APIClient
2
3 wml_credentials={
4     "url":"https://us-south.ml.cloud.ibm.com",
5     "apikey":"60ep5_yBXf9mLpygaC5hNazV0gFBod4AHub1sxrGbS6w"
6 }
7
8 client = APIClient(wml_credentials)
9 client
```

Python 3.7 and 3.8 frameworks are deprecated and will be removed in a future release. Use Python 3.9 framework instead.

Out[3]:

<ibm\_watson\_machine\_learning.client.APIClient at 0x7f4519d64f10>

In [11]:

```
1 client.spaces.get_details()
```

Out[11]:

```
{'resources': [{'entity': {'compute': [{'crn': 'crn:v1:bluemix:public:pm-20:us-south:a/6d5f4f848d3d47fab0d0a11c07ba5ecc:215cf2c3-d68b-49d5-b7e4-3b28b5226247::',
    'guid': '215cf2c3-d68b-49d5-b7e4-3b28b5226247',
    'name': 'Watson Machine Learning-f9',
    'type': 'machine_learning'}]},
  'description': '',
  'name': 'Gesture',
  'scope': {'bss_account_id': '6d5f4f848d3d47fab0d0a11c07ba5ecc'},
  'stage': {'production': False},
  'status': {'state': 'active'},
  'storage': {'properties': {'bucket_name': '10464344-5757-4c38-9942-38d2ea6e9864',
    'bucket_region': 'us-south',
    'credentials': {'admin': {'access_key_id': 'ac92b86cafec49389cf955ba712a22a1',
      'api_key': 'rTru1ieUj5Qb_107tPAG7RAu08oak91dM3G7tvSYEdzF',
      'secret_access_key': '64ae8b74ab4660373c5342a15278c00051f81e7e0efd9263',
      'service_id': 'ServiceId-62a66813-7608-46c1-bac3-bfb2701d8e07'},
      'editor': {'access_key_id': 'b2adba240c3647cdab13ad1d8618c611',
        'api_key': 'iq0eTz9R5lc_rY_LSwufSDdKjhbnElZlh8M0DutEvf4v',
        'resource_key_crn': 'crn:v1:bluemix:public:cloud-object-storage:global:a/6d5f4f848d3d47fab0d0a11c07ba5ecc:861bae2a-147c-42be-aeaa-be4c7da2462a::',
        'secret_access_key': 'd52d861a1473023d3d9cc9661ebfd4b8f6c45d5aaebb8d09',
        'service_id': 'ServiceId-fda2e439-68c4-41b9-b100-d58da1f68ce1'},
        'viewer': {'access_key_id': '93ea0f9b3d904d94aa8e9bb6dc4fc39e',
          'api_key': '5Hd5W0qgL5gHM2ayPeVVN0k0ztNlZlyaE0hx0iEhHw20',
          'resource_key_crn': 'crn:v1:bluemix:public:cloud-object-storage:global:a/6d5f4f848d3d47fab0d0a11c07ba5ecc:861bae2a-147c-42be-aeaa-be4c7da2462a::',
          'secret_access_key': '00fcc4152eabd136ab97731e4b0f9fcfd76d035a0d11eab5',
          'service_id': 'ServiceId-4a27cccd-9af7-4c89-a1b6-a0545ec014de'}}},
    'endpoint_url': 'https://s3.us-south.cloud-object-storage.appdomain.cloud',
    'guid': '861bae2a-147c-42be-aeaa-be4c7da2462a',
    'resource_crn': 'crn:v1:bluemix:public:cloud-object-storage:global:a/6d5f4f848d3d47fab0d0a11c07ba5ecc:861bae2a-147c-42be-aeaa-be4c7da2462a::'},
    'type': 'bmcos_object_storage'}]},
  'metadata': {'created_at': '2022-11-01T14:28:42.149Z',
    'creator_id': 'IBMid-665002HY57',
    'id': 'db6020f5-fa05-48be-8006-5c34793f7acb',
    'updated_at': '2022-11-01T14:29:04.752Z',
    'url': '/v2/spaces/db6020f5-fa05-48be-8006-5c34793f7acb'}}}]}
```

In [6]:

```
1 def guid_space_name(client,Gesture):
2     space = client.spaces.get_details()
3     return(next(item for item in space['resources'] if item['entity']['name']==Gesture)[
```

In [7]:

```
1 space_uid = guid_space_name(client,'Gesture')
2 space_uid
```

Out[7]:

```
'db6020f5-fa05-48be-8006-5c34793f7acb'
```

In [8]:

```
1 client.set.default_space(space_uid)
```

Out[8]:

```
'SUCCESS'
```



In [9]:

```
1 client.software_specifications.list()
```

NAME	ASSET_ID	TYPE
default_py3.6	0062b8c9-8b7d-44a0-a9b9-46c416adcbdb9	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
runtime-22.1-py3.9-cuda	26215f05-08c3-5a41-a1b0-da66306ce658	base
do_py3.8	295adbb5-9ef9-547e-9bf4-92ae3563e720	base
autoai-ts_3.8-py3.8	2aa0c932-798f-5ae9-abd6-15e0c2402fb5	base
tensorflow_1.15-py3.6	2b73a275-7cbf-420b-a912-eae7f436e0bc	base
kernel-spark3.3-py3.9	2b7961e2-e3b1-5a8c-a491-482c8368839a	base
pytorch_1.2-py3.6	2c8ef57d-2687-4b7d-acce-01f94976dac1	base
spark-mllib_2.3	2e51f700-bca0-4b0d-88dc-5c6791338875	base
pytorch-onnx_1.1-py3.6-edt	32983cea-3f32-4400-8965-dde874a8d67e	base
spark-mllib_3.0-py37	36507ebe-8770-55ba-ab2a-eafe787600e9	base
spark-mllib_2.4	390d21f8-e58b-4fac-9c55-d7ceda621326	base
autoai-ts_rt22.2-py3.10	396b2e83-0953-5b86-9a55-7ce1628a406f	base
xgboost_0.82-py3.6	39e31acd-5f30-41dc-ae44-60233c80306e	base
pytorch-onnx_1.2-py3.6-edt	40589d0e-7019-4e28-8daa-fb03b6f4fe12	base
pytorch-onnx_rt22.2-py3.10	40e73f55-783a-5535-b3fa-0c8b94291431	base
default_r36py38	41c247d3-45f8-5a71-b065-8580229facf0	base
autoai-ts_rt22.1-py3.9	4269d26e-07ba-5d40-8f66-2d495b0c71f7	base
autoai-obm_3.0	42b92e18-d9ab-567f-988a-4240ba1ed5f7	base
pmml-3.0_4.3	493bcb95-16f1-5bc5-bee8-81b8af80e9c7	base
spark-mllib_2.4-r_3.6	49403dff-92e9-4c87-a3d7-a42d0021c095	base
xgboost_0.90-py3.6	4ff8d6c2-1343-4c18-85e1-689c965304d3	base
pytorch-onnx_1.1-py3.6	50f95b2a-bc16-43bb-bc94-b0bed208c60b	base
autoai-ts_3.9-py3.8	52c57136-80fa-572e-8728-a5e7cbb42cde	base
spark-mllib_2.4-scala_2.11	55a70f99-7320-4be5-9fb9-9edb5a443af5	base
spark-mllib_3.0	5c1b0ca2-4977-5c2e-9439-ffd44ea8ffe9	base
autoai-obm_2.0	5c2e37fa-80b8-5e77-840f-d912469614ee	base
spss-modeler_18.1	5c3cad7e-507f-4b2a-a9a3-ab53a21dee8b	base
cuda-py3.8	5d3232bf-c86b-5df4-a2cd-7bb870a1cd4e	base
autoai-kb_3.1-py3.7	632d4b22-10aa-5180-88f0-f52dfb6444d7	base
pytorch-onnx_1.7-py3.8	634d3cdc-b562-5bf9-a2d4-ea90a478456b	base

Note: Only first 50 records were displayed. To display more use 'limit' parameter.

In [10]:

```
1 software_space_uid = client.software_specifications.get_uid_by_name('tensorflow_rt22.1-  
2 software_space_uid
```

Out[10]:

```
'acd9c798-6974-5d2f-a657-ce06e986df4d'
```

In [12]:

```
1 model_details = client.repository.store_model(model='hand-gesture.tgz',meta_props={  
2     client.repository.ModelMetaNames.NAME:"Model Training",  
3     client.repository.ModelMetaNames.TYPE:"tensorflow_2.7",  
4     client.repository.ModelMetaNames.SOFTWARE_SPEC_UID:software_space_uid  
5 })
```

In [13]:

```
1 model_details
```

Out[13]:

```
{'entity': {'hybrid_pipeline_software_specs': [],  
  'software_spec': {'id': 'acd9c798-6974-5d2f-a657-ce06e986df4d',  
    'name': 'tensorflow_rt22.1-py3.9'},  
  'type': 'tensorflow_2.7'},  
 'metadata': {'created_at': '2022-11-14T09:00:12.151Z',  
  'id': '1408ff7a-08cb-436b-8523-9854e0153625',  
  'modified_at': '2022-11-14T09:00:18.305Z',  
  'name': 'Model Training',  
  'owner': 'IBMid-665002HY57',  
  'resource_key': '52ed3e7a-19ed-422a-88d2-b727f8ceca73',  
  'space_id': 'db6020f5-fa05-48be-8006-5c34793f7acb'},  
 'system': {'warnings': []}}
```

In [14]:

```
1 model_id = client.repository.get_model_id(model_details)  
2 model_id
```

Out[14]:

```
'1408ff7a-08cb-436b-8523-9854e0153625'
```

In [16]:

```
1 client.repository.download(model_id,'gesture.tar.gb')
```

Successfully saved model content to file: 'gesture.tar.gb'

Out[16]:

```
'/content/gesture.tar.gb'
```

