Project name	Car resale value prediction
Team ID	PNT2022TMID11620
Sprint number	4

In this sprint we deployed our model in the IBM cloud

The below code is used to insert the dataset into the IBM cloud where we must train and run our model

```
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='nDK3erqrsighqUE5UEOFDu-ZyuiImZ6U4QoP2_2Ri2Zu',
    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 = 'carresalevaluepredictionibmklncei-donotdelete-pr-x5jzl2jrfwjnzx'
object_key = 'autos1.csv'

body = cos_client.get_object(Bucket=bucket,Key=object_key)['Body']
# add missing __iter__ method, so pandas accepts body as file-like object
if not hasattr(body, "__iter__"): body.__iter__ = types.MethodType( __iter__, body )

df = pd.read_csv(body)
df.head()
```

Then we need to install the ibm_watson_machine_learning package

```
!pip install ibm_watson_machine_learning
```

Now we must get our url and api key and must insert in the below code

```
from ibm_watson_machine_learning import APIClient
wml_credentials = {
    "url":"https://us-south.ml.cloud.ibm.com",
    "apikey":"DceKrEN9EBsmpXev8xO21lXYhIohOV5BPm4DVs72adUW"
}
client=APIClient(wml_credentials)
```

You can get your region link from https://cloud.ibm.com/docs/overview?topic=overview-locations

Then get the API key

API key details

Name
carresalemodel

Description

ID
ApiKey-3180b458-2d3c-4f49-808e-e824c007187f

Status
Unlocked

Email
910619205068@smartinternz.com

Created by
Venkatesh T

Date created
2022-11-20 06:47 GMT

Last authentication
2022-11-21 10:00:12:192 GMT

Auth count
69

Now create space and then give the software spec needed

```
def guid_from_space_name(client,space_name):
    space = client.spaces.get_details()
    return(next(item for item in space['resources'] if item['entity']["name"] == space_name)['metadata']['id'])
```

```
space_uid=guid_from_space_name(client,'carresale model')
print(space_uid)
```

```
2c9c0aec-de8e-4fa1-8dd6-9f48044b8de2
```

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

```
'SUCCESS'
```

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

```
software_spec_uid = client.software_specifications.get_uid_by_name('runtime-22.1-py3.9')
software_spec_uid
```

```
'12b83a17-24d8-5082-900f-0ab31fbfd3cb'
```

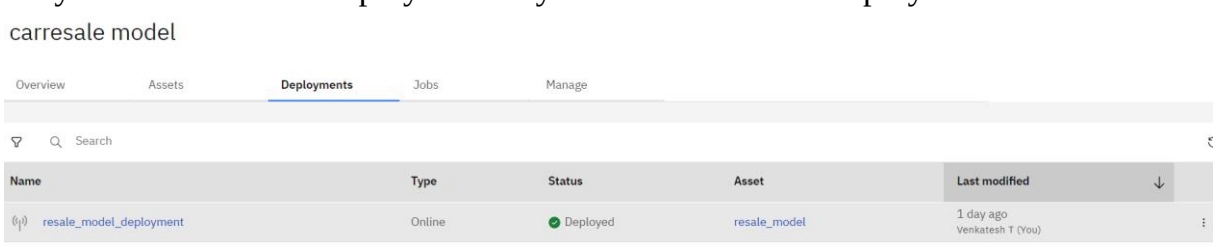
```
model_details=client.repository.store_model(model=r,meta_props={
    client.repository.ModelMetaNames.NAME:"resale_model",
    client.repository.ModelMetaNames.TYPE:"scikit-learn_1.0",
    client.repository.ModelMetaNames.SOFTWARE_SPEC_UID:software_spec_uid
})

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

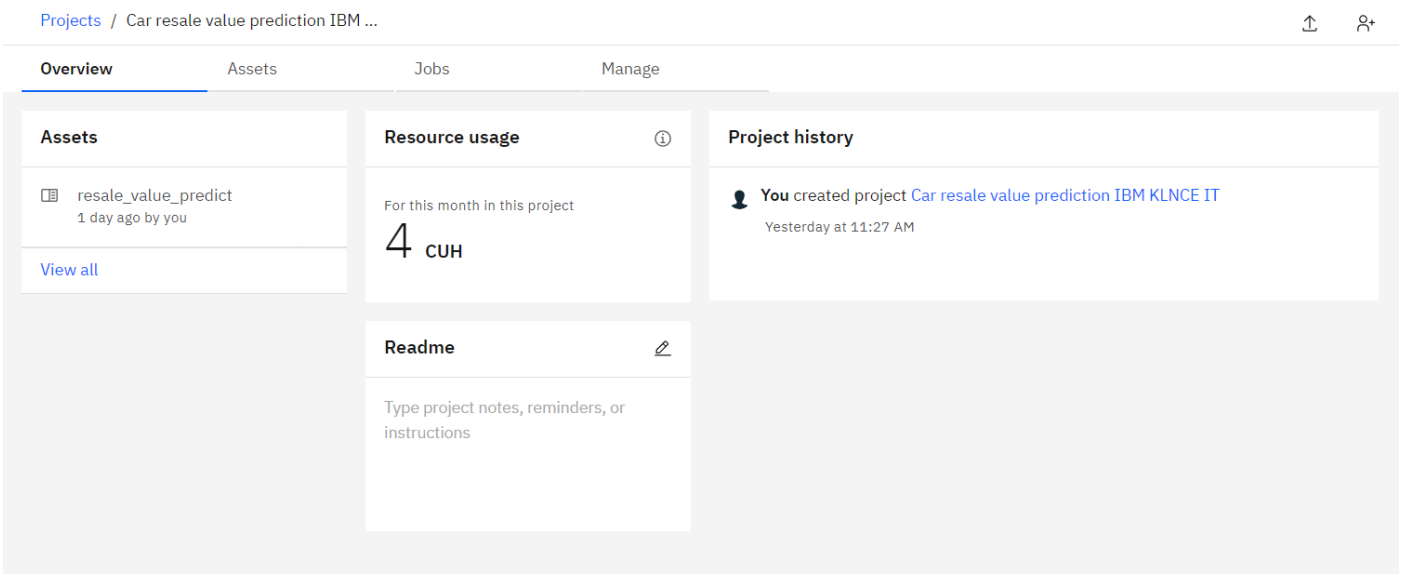
```
model_id
```

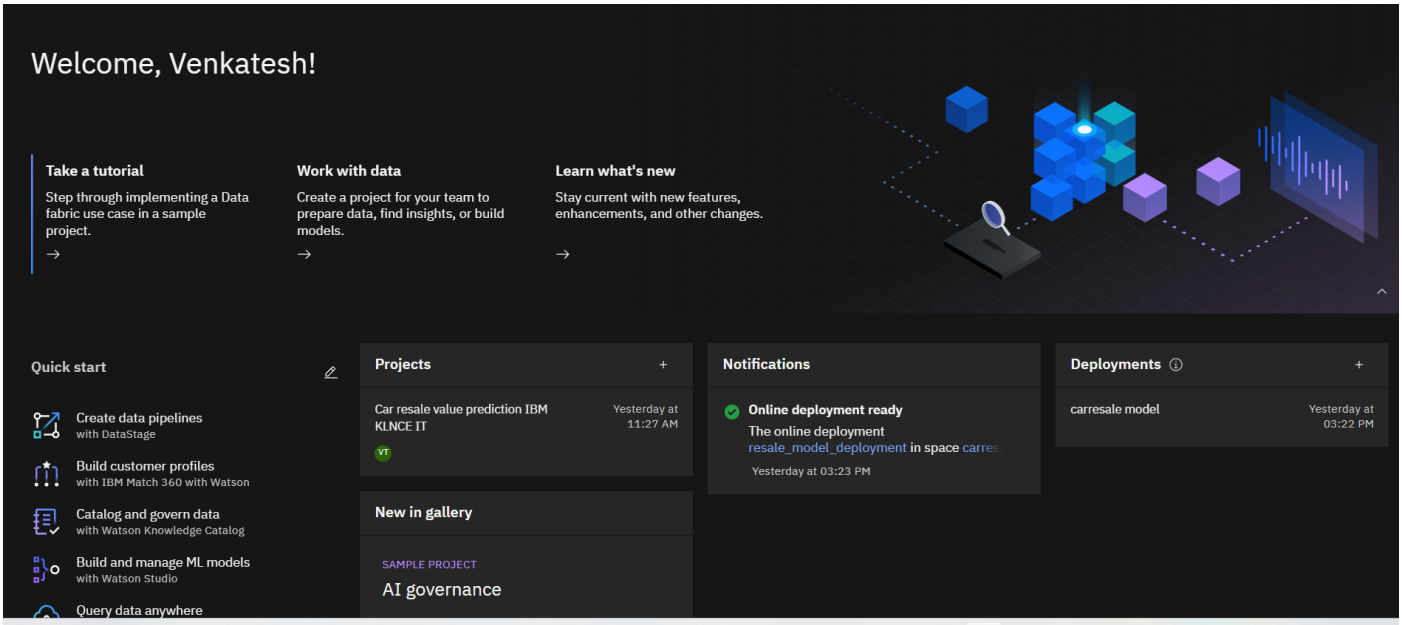
```
'8480c953-e0a8-47e7-b573-be0d6370b164'
```

Now your model will be deployed once you have clicked the deploy button from the assets



Screenshots of the dashboards





The endpoint and response coding are below