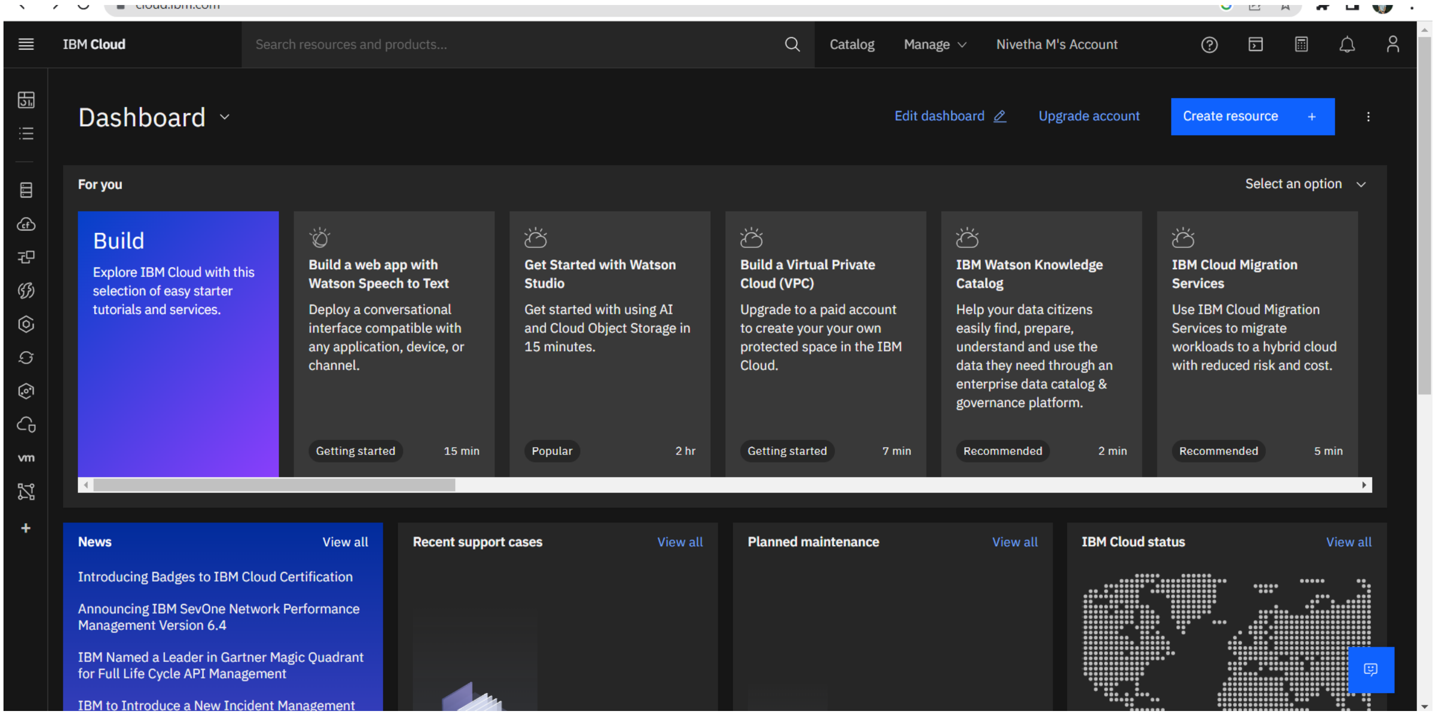
TRAIN THE MODEL ON IBM



cloud.ibm.com

IBM Cloud

Search resources and products...

Catalog Manage Nivetha M's Account

Dashboard

Edit dashboard Upgrade account Create resource +

For you

Select an option

Build

Explore IBM Cloud with this selection of easy starter tutorials and services.

Build a web app with Watson Speech to Text

Deploy a conversational interface compatible with any application, device, or channel.

Getting started 15 min

Get Started with Watson Studio

Get started with using AI and Cloud Object Storage in 15 minutes.

Popular 2 hr

Build a Virtual Private Cloud (VPC)

Upgrade to a paid account to create your your own protected space in the IBM Cloud.

Getting started 7 min

IBM Watson Knowledge Catalog

Help your data citizens easily find, prepare, understand and use the data they need through an enterprise data catalog & governance platform.

Recommended 2 min

IBM Cloud Migration Services

Use IBM Cloud Migration Services to migrate workloads to a hybrid cloud with reduced risk and cost.

Recommended 5 min

News View all

Introducing Badges to IBM Cloud Certification

Announcing IBM SevOne Network Performance Management Version 6.4

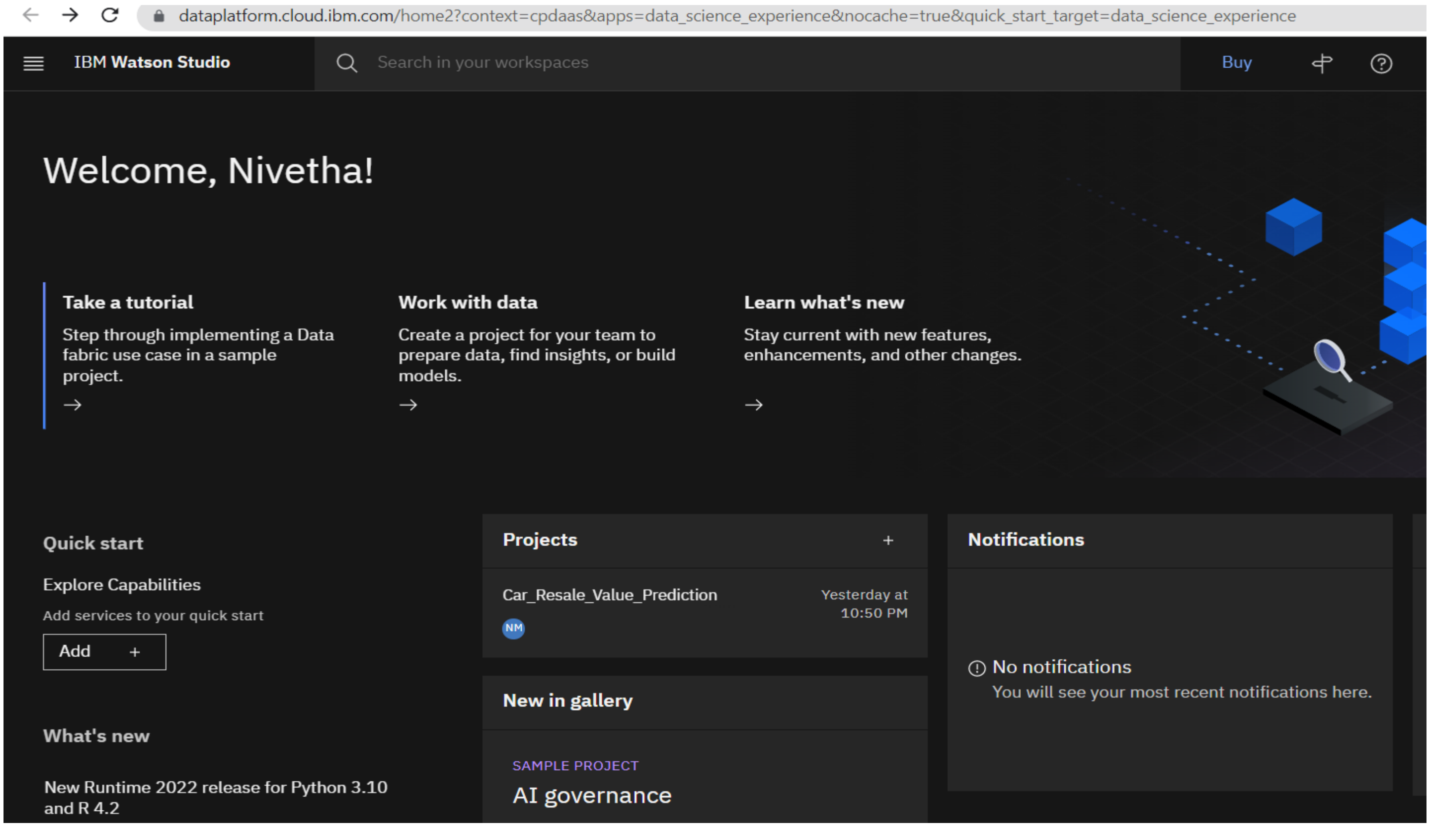
IBM Named a Leader in Gartner Magic Quadrant for Full Life Cycle API Management

IBM to Introduce a New Incident Management

Recent support cases View all

Planned maintenance View all

IBM Cloud status View all



dataplatform.cloud.ibm.com/home2?context=cpdaas&apps=data_science_experience&nocache=true&quick_start_target=data_science_experience

IBM Watson Studio

Search in your workspaces

Buy

Welcome, Nivetha!

Take a tutorial

Step through implementing a Data fabric use case in a sample project.

→

Work with data

Create a project for your team to prepare data, find insights, or build models.

→

Learn what's new

Stay current with new features, enhancements, and other changes.

→

Quick start

Explore Capabilities

Add services to your quick start

Add +

What's new

New Runtime 2022 release for Python 3.10 and R 4.2

Projects +

Car_Resale_Value_Prediction Yesterday at 10:50 PM

NM

New in gallery

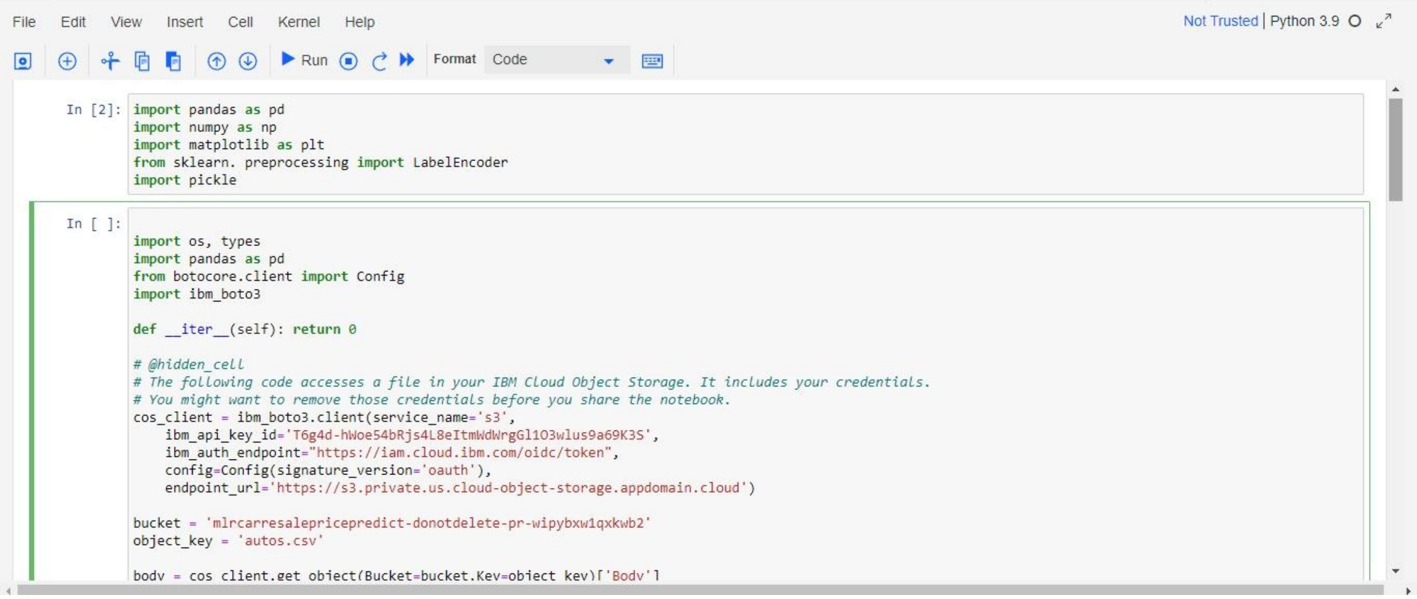
SAMPLE PROJECT

AI governance

Notifications

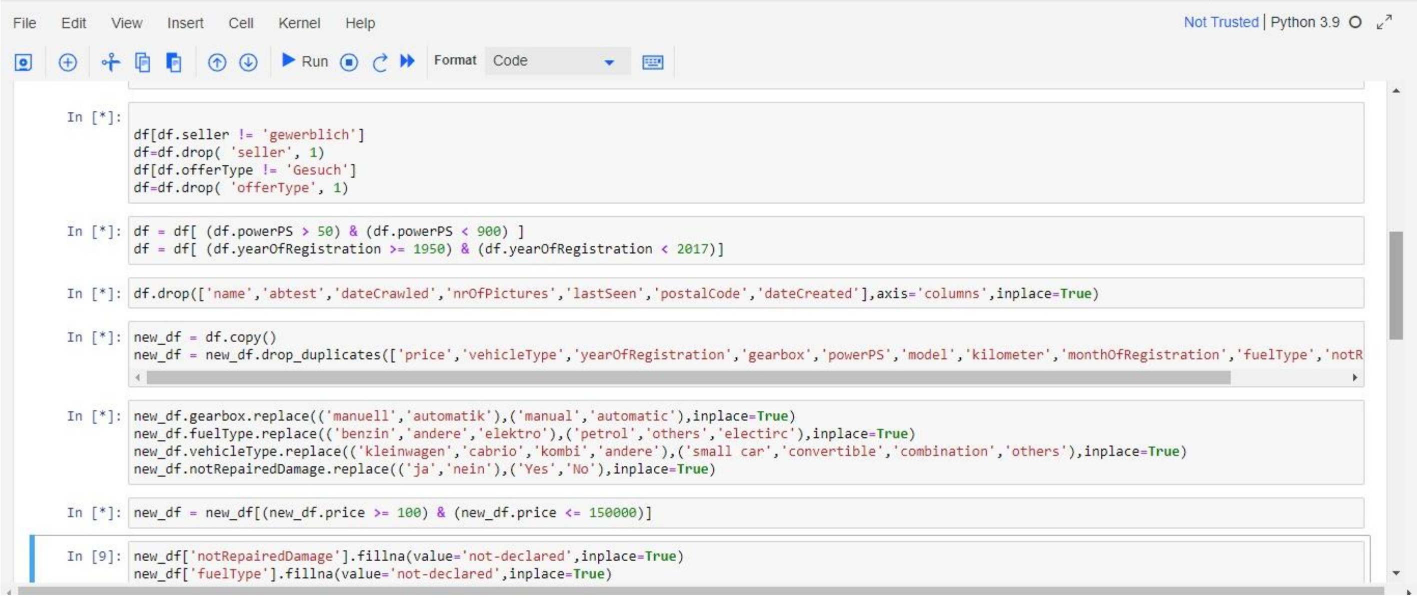
No notifications

You will see your most recent notifications here.



In [2]:
```python
import pandas as pd
import numpy as np
import matplotlib as plt
from sklearn. preprocessing import LabelEncoder
import pickle
```

In [ ]:
```python

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='T6g4d-hWoe54bRjs4L8eItmWdWrgGl1O3wlus9a69K3S',
    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 = 'mlrcarresalepricepredict-donotdelete-pr-wipybxw1qxkwb2'
object_key = 'autos.csv'

body = cos_client.get_object(Bucket=bucket,Key=object_key)['Body']
```



In [*]:
```python

df[df.seller != 'gewerblich']
df=df.drop( 'seller', 1)
df[df.offerType != 'Gesuch']
df=df.drop( 'offerType', 1)
```

In [*]:
```python
df = df[ (df.powerPS > 50) & (df.powerPS < 900) ]
df = df[ (df.yearOfRegistration >= 1950) & (df.yearOfRegistration < 2017)]
```

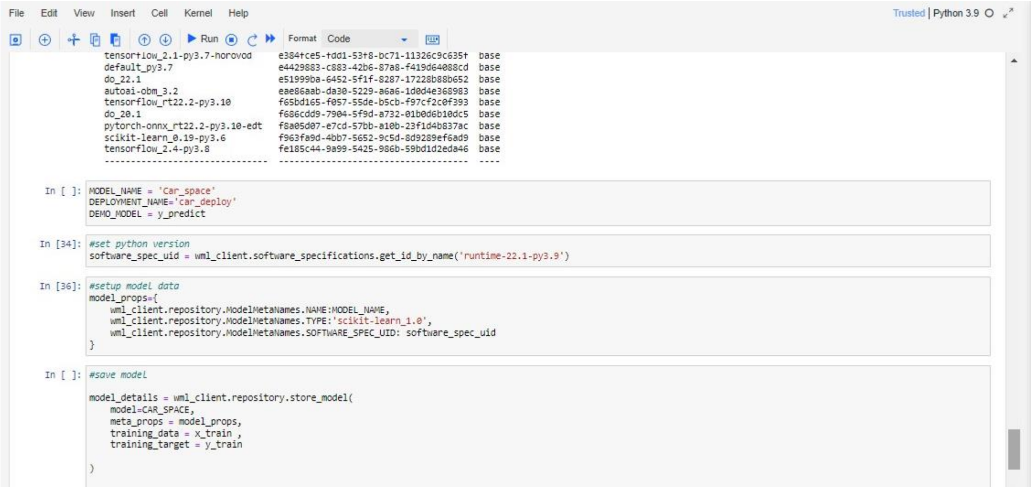
In [*]:
```python
df.drop(['name','abtest','dateCrawled','nrOfPictures','lastSeen','postalCode','dateCreated'],axis='columns',inplace=True)
```

In [*]:
```python
new_df = df.copy()
new_df = new_df.drop_duplicates(['price','vehicleType','yearOfRegistration','gearbox','powerPS','model','kilometer','monthOfRegistration','fuelType','notR
```

In [*]:
```python
new_df.gearbox.replace(('manuell','automatik'),('manual','automatic'),inplace=True)
new_df.fuelType.replace(('benzin','andere','elektro'),('petrol','others','electirc'),inplace=True)
new_df.vehicleType.replace(('kleinwagen','cabrio','kombi','andere'),('small car','convertible','combination','others'),inplace=True)
new_df.notRepairedDamage.replace(('ja','nein'),('Yes','No'),inplace=True)
```

In [*]:
```python
new_df = new_df[(new_df.price >= 100) & (new_df.price <= 150000)]
```

In [9]:
```python
new_df['notRepairedDamage'].fillna(value='not-declared',inplace=True)
new_df['fuelType'].fillna(value='not-declared',inplace=True)
```



```
  tensorflow_2.1-py3.7-horovod    e384fce5-fdd1-53f8-bc71-11326c9c635f  base
  default_py3.7                   e4429883-c883-42b6-87a8-f419d64088cd  base
  do_22.1                         e51999ba-6452-5f1f-8287-17228b88b652  base
  autoai-obm_3.2                  eae86aab-da30-5229-a6a6-1d0d4e368983  base
  tensorflow_rt22.2-py3.10        f65bd165-f057-55de-b5cb-f97cf2c0f393  base
  do_20.1                         f686cdd9-7904-5f9d-a732-01b0d6b10dc5  base
  pytorch-onnx_rt22.2-py3.10-edt  f8a05d07-e7cd-57bb-a10b-23f1d4b837ac  base
  scikit-learn_0.19-py3.6         f963fa9d-4bb7-5652-9c5d-8d9289ef6ad9  base
  tensorflow_2.4-py3.8            fe185c44-9a99-5425-986b-59bd1d2eda46  base
  ------------------------------  ------------------------------------  ----
```

```
In [ ]: MODEL_NAME = 'Car_space'
        DEPLOYMENT_NAME='car_deploy'
        DEMO_MODEL = y_predict
```

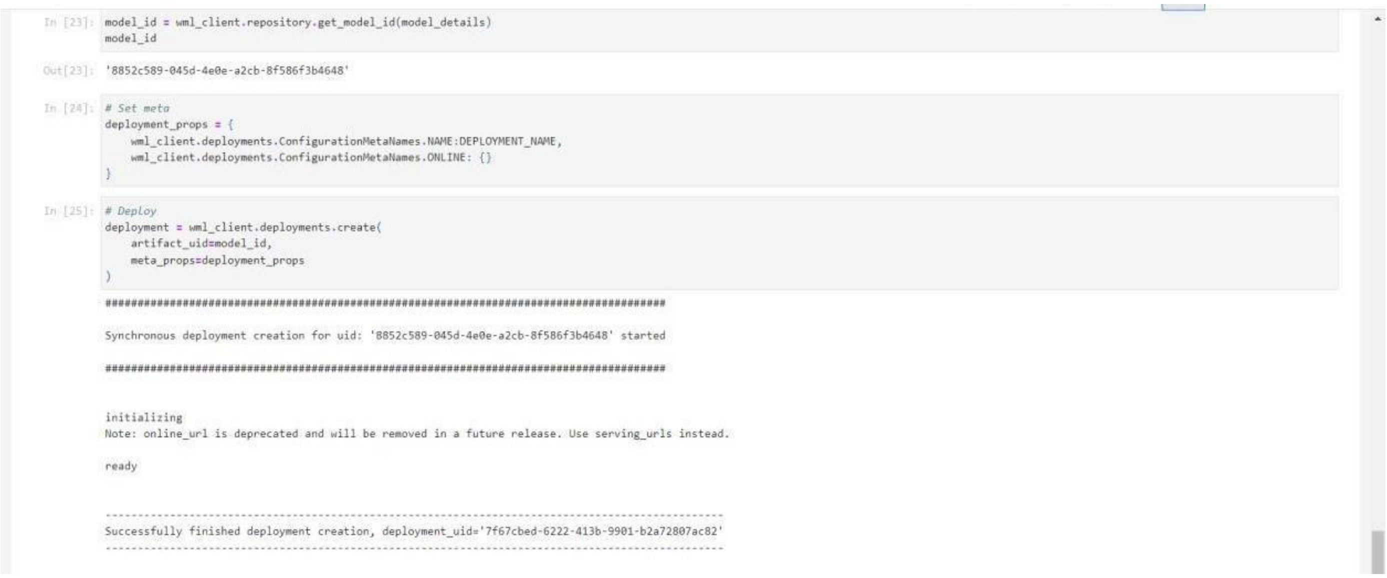
```
In [34]: #set python version
         software_spec_uid = wml_client.software_specifications.get_id_by_name('runtime-22.1-py3.9')
```

```
In [36]: #setup model data
         model_props={
             wml_client.repository.ModelMetaNames.NAME:MODEL_NAME,
             wml_client.repository.ModelMetaNames.TYPE:'scikit-learn_1.0',
             wml_client.repository.ModelMetaNames.SOFTWARE_SPEC_UID: software_spec_uid
         }
```

```
In [ ]: #save model

        model_details = wml_client.repository.store_model(
            model=CAR_SPACE,
            meta_props = model_props,
            training_data = x_train ,
            training_target = y_train

        )
```

Upload one file at a time. All file types accepted. 5 GB max file size.

autos.csv



```
In [23]: model_id = wml_client.repository.get_model_id(model_details)
         model_id

Out[23]: '8852c589-045d-4e0e-a2cb-8f586f3b4648'
```

```
In [24]: # Set meta
         deployment_props = {
             wml_client.deployments.ConfigurationMetaNames.NAME:DEPLOYMENT_NAME,
             wml_client.deployments.ConfigurationMetaNames.ONLINE: {}
         }
```

```
In [25]: # Deploy
         deployment = wml_client.deployments.create(
             artifact_uid=model_id,
             meta_props=deployment_props
         )

         ########################################################################################

         Synchronous deployment creation for uid: '8852c589-045d-4e0e-a2cb-8f586f3b4648' started

         ########################################################################################


         initializing
         Note: online_url is deprecated and will be removed in a future release. Use serving_urls instead.

         ready


         -------------------------------------------------------------------------------------------------
         Successfully finished deployment creation, deployment_uid='7f67cbed-6222-413b-9901-b2a72807ac82'
         -------------------------------------------------------------------------------------------------
```