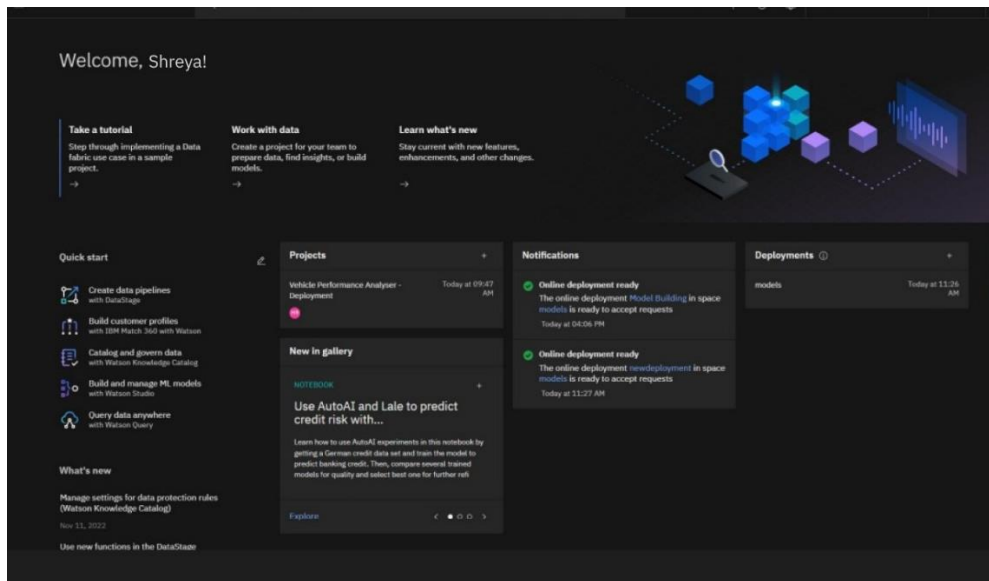


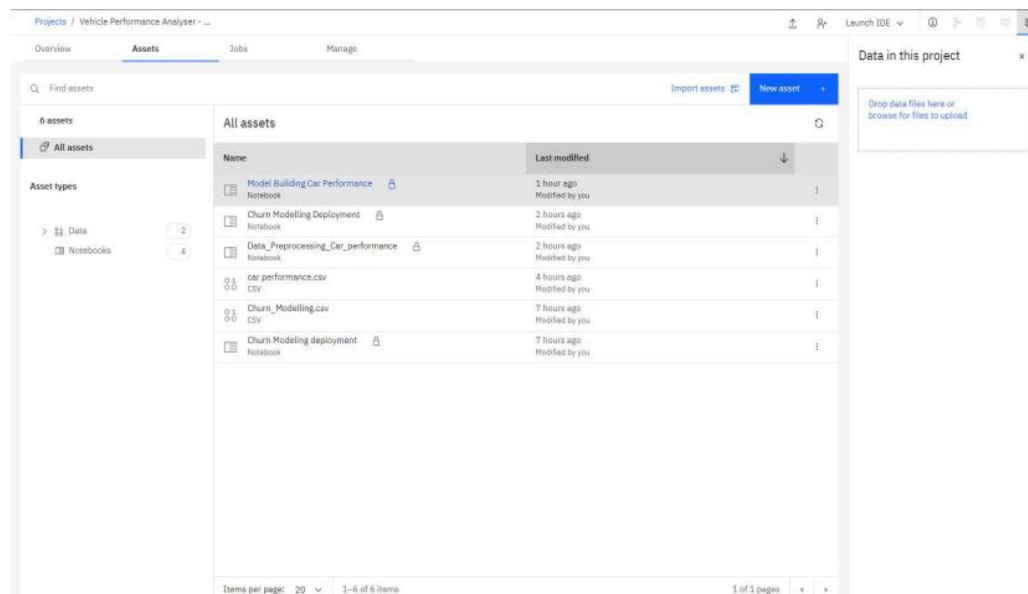
## Train Model on IBM

Date	14.11.2022
Team ID	PNT2022TMID00551
Project Name	Machine Learning based Vehicle Performance Analyzer

### 1. Training the ML Model in IBM Watson Studio:



### 2. Model for Vehicle performance has been created using Jupyter Notebook.



Dataset: Car\_performance.csv

# Churn\_Modeling.csv

```
Projects / Vehicle Performance Analyser - ... / Model Building Car Performance

Model Building
Importing Libraries

In [13]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import statsmodels.formula.api as smf

Importing Dataset

In [14]: import os, types
import pandas as pd
from botocore.client import Config
import 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 = boto3.client(service_name='s3',
    aws_api_key_id='5evQztyu_H127gkchZet-v3Mc30300Qg@ibmcloud',
    aws_auth_endpoint='https://iam.cloud.ibm.com/oidc/token',
    config=Config(signature_version='saure'),
    endpoint_url='https://s3.private.us.cloud-object-storage.appdomain.cloud')

bucket = 'vehicleperformanceanalyzerdeploy-donotdelete-pr-scujgslptf1'
object_key = 'car performance.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)

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

	mpg	cylinders	displacement	horsepower	weight	acceleration	model year	origin	car name
0	15.0	8	307.0	130	3504	12.0	70	1	chevrolet chevelle malibu

3. Model for Vehicle performance has been created using Jupyter Notebook and Deployed

Deployments /

models

Overview Assets Deployments Jobs Manage

Name	Type	Status	Asset	Last modified	
Model Building	Online	Deployed	Model Building	1 hour ago Harpreet R (You)	
newdeployment	Online	Deployed	Churn_modeling	5 hours ago Harpreet R (You)	

Items per page: 20 1-2 of 2 items 1 of 1 pages

Drop files here or browse for files to upload.

Stay on the page until upload completes. Incomplete uploads are cancelled.

Deployments / models / Model Building /

Model Building Deployed Online

API reference

Test

Direct link

Endpoint

https://us-south-ml.cloud.ibm.com/ml/v4/deployments/e8991212-3864-47a7-be77-73a1a2682e1/predictions?version=2022-11-14

Bearer token

IAH

Code snippets

cURL

Java

JavaScript

Python

Scala

```
import requests

# NOTE: you must manually set API_KEY below using information retrieved from your IBM Cloud account.
API_KEY = "your API key"
token_response = requests.post("https://iam.cloud.ibm.com/identity/token", data={"apikey":
API_KEY, "grant_type": "urn:ibm:params:oauth:grant-type:apikey"})
nToken = token_response.json()["access_token"]

headers = {'Content-Type': 'application/json', 'Authorization': 'Bearer ' + nToken}

# NOTE: manually define and pass the array(s) of values to be scored in the next line
payload_scoring = {"input_data": [{"fields": [array_of_input_fields], "values": [array_of_values_to_be_scored, another_array_of_values_to_be_scored]}]}

response_scoring = requests.post("https://us-south-ml.cloud.ibm.com/ml/v4/deployments/e8991212-3864-47a7-be77-73a1a2682e1/predictions?version=2022-11-14
headers={'Authorization': 'Bearer ' + nToken})
```

Model Building

Created

Nov 14, 2022, 4:06 PM

Updated

Nov 14, 2022, 4:06 PM

Deployment ID

e8991212-3864-47a7-be77-73a1a2682e1

Software specification

runtime: 22.1-ivy3.9

Copies

1

Serving name

No serving name.

Description

No description provided.

Tags

Add tags to make assets easier to find.

Associated asset

Model Building

d4aa5e82-5194-4c38-9e6f-6b...

Model ID

d4aa5e82-5194-4c38-9e6f-6b...