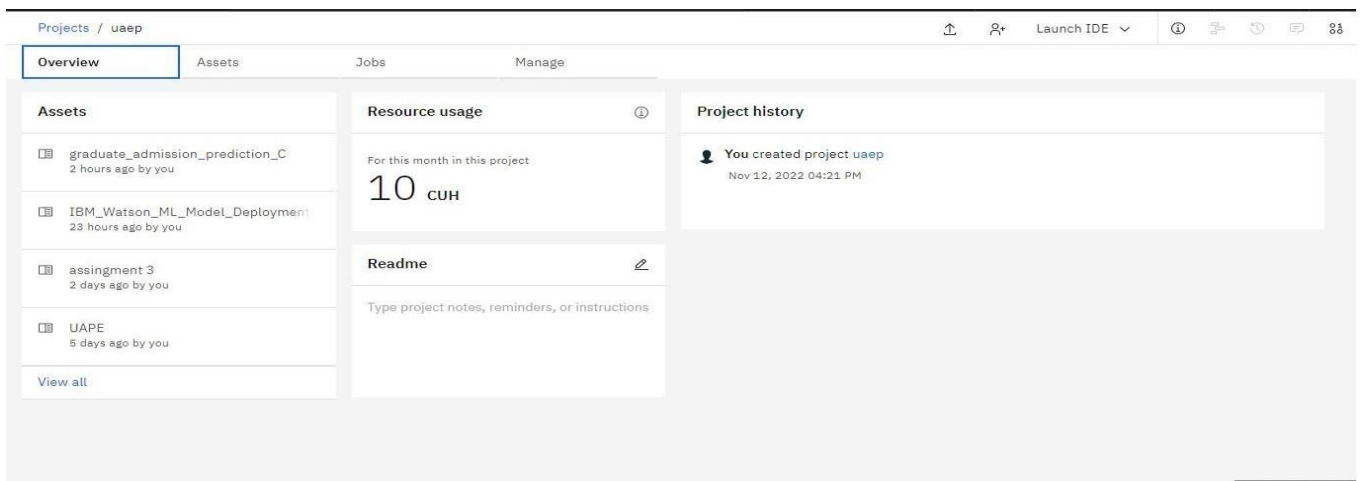


Training ML Model on IBM Watson

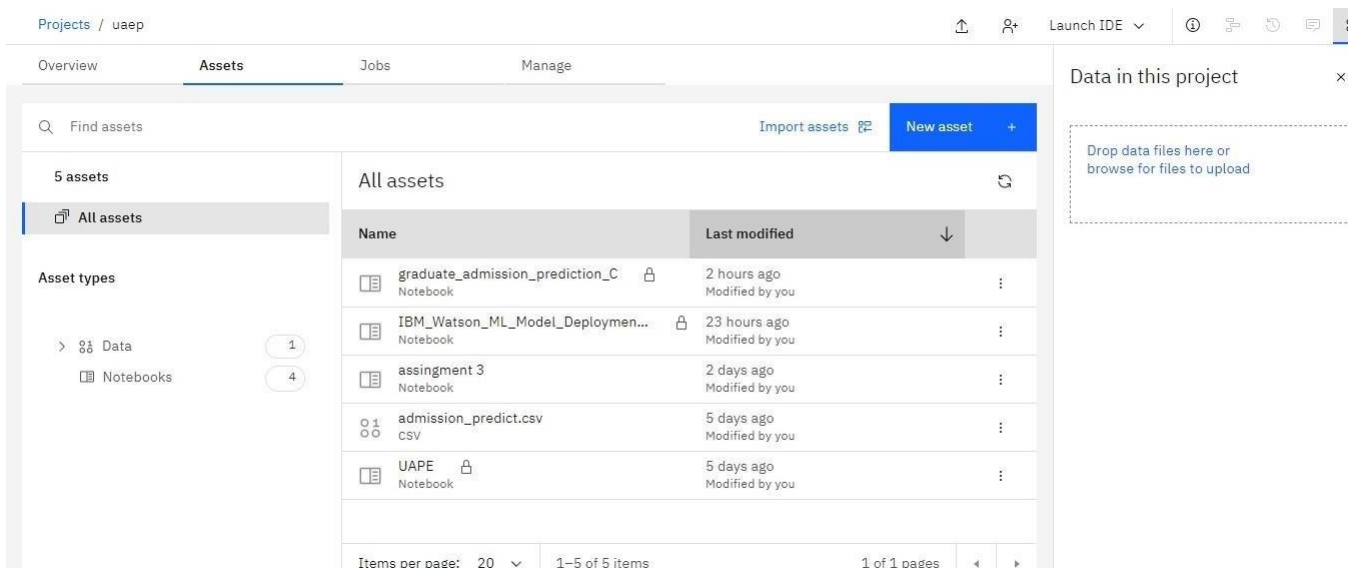
TEAM ID: PNT2022TMID25845

PROJECT: University Admit Eligibility Predictor

i) Setting up Watson Studio for running Jupyter notebooks



Training and saving the model in IBM Watson Machine Learning Service



PERSISTING THE MULTIPLE LINEAR REGRESSION MODEL AND DEPLOYING IT IN IBM CLOUD

```
In [60]: #Set Python Version
software_spec_uid = client.software_specifications.get_uid_by_name("runtime-22.1-py3.9")
software_spec_uid
```

```
Out[60]: '12b83a17-24d8-5082-900f-0ab31fbfd3cb'
```

```
In [61]: model_details = client.repository.store_model(model = multiple_lin_reg, meta_props={
    client.repository.ModelMetaNames.NAME: "UAEP_Multiple_Linear_Regression",
    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)
```

```
In [62]: model_id
```

```
Out[62]: '8083e827-e81f-40d1-84ab-20d511771869'
```

Assets:

Deployments /

Regression-Models

Deployment space for the University Admit Eligibility Predictor project

Overview **Assets** Deployments Jobs Manage

Find assets Import assets

1 asset

All assets 1

Asset types

Models 1

Name	Last modified
UAEP_Multiple_Linear_Regression Model	34 minutes ago Service

Deployments:

Deployments /

Regression-Models

Deployment space for the University Admit Eligibility Predictor project

Overview Assets **Deployments** Jobs Manage

Search

Name	Type	Status	Asset	Last modified
UAEP_Multiple_Linear_Regression_Deployment	Online	Deployed	UAEP_Multiple_Linear_Regression	35 minutes ago Krishnan S (You)

ii) Testing the created model using the API created for the deployed model:

```
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'})
mltoken = token_response.json()["access_token"]

header = {'Content-Type': 'application/json', 'Authorization': 'Bearer ' + mltoken}

# NOTE: manually define and pass the array(s) of values to be scored in the next line
payload_scoring = {"input_data": [{"field": [{"GRE Score", "TOEFL Score", "University Rating", "SOP", "LOR ", "CGPA", "Research"}], "values": [[326, 110, 2, 3.5, 4, 9.23, 1]]}}

response_scoring = requests.post('https://us-south.ml.cloud.ibm.com/ml/v4/deployments/uaep_deployment/predictions?version=2022-11-12', json=payload_scoring,
    headers={'Authorization': 'Bearer ' + mltoken})
print("Scoring response")
print(response_scoring.json())

Scoring response
{'predictions': [{'fields': ['prediction'], 'values': [[[0.8448151378927107]]]]}]}
```