Training ML Model on IBM Watson

TEAM ID: PNT2022TMID34683

PROJECT: University Admit Eligibility Predictor

i) Setting up Watson Studio for running Jupyter notebooks

All assets		5
Name	Last modified	\
Regression Models A	9 minutes ago Modified by you	ı
Admission_Predict_Ver1.1.cs	24 hours ago Modified by you	I
Admission_Predict.csv	24 hours ago Modified by you	1

ii) 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

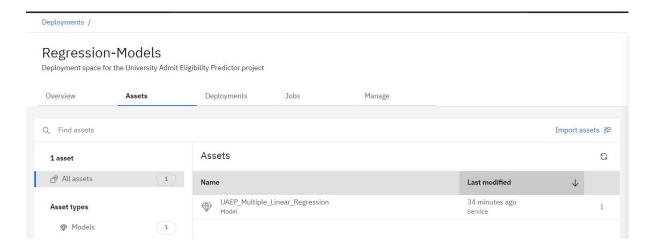
Out[60]: '12b83a17-24d8-5082-900f-0ab31fbfd3cb'

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)

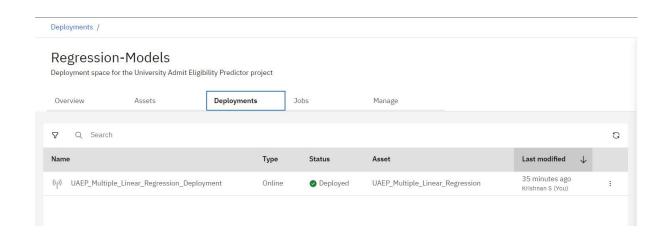
In [62]: model_id

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

Assets:



Deployments:



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

```
# MOTE: you must manually set API_KEY below using information retrieved from your IBM Cloud account.
API_KEY = "<*our-API_Key>"
token_response = requests.post('https://iam.cloud.ibm.com/identity/token', data={"apikey":
API_KEY, "grant_type": 'unribm:paramas:oauth:grant-type:apikey'})
mltoken = token_response.json()["access_token"]
header = {'Content-Type': 'application/json', 'Authorization': 'Bearer' + mltoken}

# MOTE: 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]]]}}}}
```