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Watson Studio-i8 Active Add tags Details Actions...

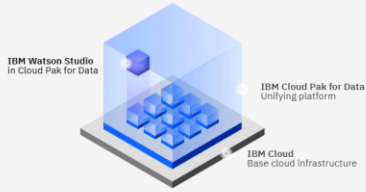
Manage

Plan

 **Watson Studio in Cloud Pak for Data**

Watson Studio is one of the core services in Cloud Pak for Data as a Service. Build, deploy and manage AI models, and optimize decisions on IBM Cloud Pak for Data.

[Launch in IBM Cloud Pak for Data](#)



IBM Watson Studio is part of IBM Cloud Pak for Data and serves as the data science capability of the data fabric architecture.

**Helpful links**

**Documentation**  
Learn about tools, features, and how to perform a wide variety of Data and AI tasks.

**Learning path**  
Start a step-by-step tutorial to get up and running quickly.

**Videos**  
Watch videos to learn about Watson Studio and Cloud Pak for Data as a Service.

IBM Watson Studio

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[Projects](#) / University Admit Eligibility Predic...

**Overview** **Assets** **Jobs** **Manage**

**Assets**

Assets that you create with tools show here. See data assets on the Assets page.

 [View all](#)

**Resource usage**

For this month in this project

0 CUH

**Project history**

You created project [University Admit Eligibility Prediction](#) Today at 06:28 PM

**Readme**

Type project notes, reminders, or instructions

IBM Watson Studio

Welcome, Nallamala!

**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.  
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**Quick start**

- Create data pipelines with DataStage
- Build customer profiles with IBM Match 360 with Watson
- Catalog and govern data with Watson Knowledge Catalog
- Query data anywhere with Watson Query

**Projects**

University Admit Eligibility Prediction Today at 06:28 PM

**New in gallery**

**SAMPLE PROJECT**  
**AI governance**  
Tutorials in this project: Build and deploy a machine learning model to predict which applicants qualify for

**Notifications**

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**Deployments**

No deployment spaces  
After you create spaces, you'll see them here.  
New deployment space +

IBM Watson Studio

Projects / University Admit Eligibility Predict... / University Prediction

File Edit View Insert Cell Kernel Help Not Trusted | Python 3.9

### Using Google Colab with GitHub

```
In [ ]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

from sklearn.model_selection import train_test_split
from sklearn.ensemble import RandomForestRegressor
from sklearn.metrics import mean_squared_error, accuracy_score

In [ ]: from google.colab import drive
drive.mount('/content/gdrive')
Mounted at /content/gdrive

In [ ]: collegeData = pd.read_csv('/content/gdrive/MyDrive/Admission_Predict.xls')
trimColNames = [name.strip() for name in collegeData.columns]
collegeData.columns = trimColNames

In [ ]: collegeData.head()
```

Out[4]:

	Serial No.	GRE Score	TOEFL Score	University Rating	SOP	LOR	CGPA	Research	Chance of Admit
0	1	337	118	4	4.5	4.5	9.65	1	0.92
1	2	324	107	4	4.0	4.5	8.87	1	0.76
2	3	316	104	3	3.0	3.5	8.00	1	0.72

Resource list

Create resource +

Name	Group	Location	Product	Status	Tags
Watson Machine Learning	Filter by group or org...	Filter...	Filter...	Filter...	Filter...
AI / Machine Learning (1 / 2)					
Watson Machine Learning-yv	Default	Dallas	Watson Machine Learning	Active	cpdaas

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Mounted at /content/gdrive

```

In [ ]:
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='liwSLCQKQcQg3AZB4c8tT18Rum8h4QfER8pfn_P7nq7K',
                              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 = 'universityadmiteligibilitypredict-donotdelete-pr-enstcnwzpek6r'
object_key = 'Admission_Predict.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_data_1 = pd.read_csv(body)
df_data_1.head()
trimColNames = [name.strip() for name in collegeData.columns]
collegeData.columns = trimColNames

In [ ]: collegeData.head()
  
```

Data

Files

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

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Admission\_Predict.csv

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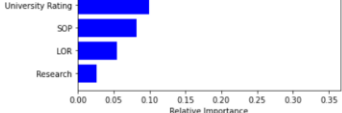
Projects / University Admit Eligibility Predict... / University Prediction

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Run

Format Markdown



```
In [16]: newPerson = [[330, 110, 4, 4.5, 4.5, 9.5, 0]]

In [17]: pred = rf.predict(newPerson)
pred[0]
```

/opt/conda/envs/Python-3.9/lib/python3.9/site-packages/sklearn/base.py:450: UserWarning: X does not have valid feature names, but RandomForestRegressor was fitted with feature names  
warnings.warn(

Out[17]: 0.88174284848481

Google Colaboratory is designed to integrate cleanly with GitHub, allowing both loading notebooks from github and saving notebooks to github.

### Loading Public Notebooks Directly from GitHub

Colab can load public github notebooks directly, with no required authorization step.

For example, consider the notebook at this address: <https://github.com/googlecolab/colabtools/blob/master/notebooks/colab-github-demo.ipynb>.

The direct colab link to this notebook is: <https://colab.research.google.com/github/googlecolab/colabtools/blob/master/notebooks/colab-github-demo.ipynb>.

Data

Files

Connections

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Admission\_Predict.csv

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## Deployment

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Run

Format Markdown

```
Out[17]: 0.88174284848481

In [18]: !pip install ibm_watson_machine_learning

Requirement already satisfied: ibm_watson_machine_learning in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (1.0.257)
Requirement already satisfied: importlib-metadata in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (4.8.2)
Requirement already satisfied: certifi in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (2022.9.24)
Requirement already satisfied: urllib3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (1.26.7)
Requirement already satisfied: packaging in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (21.3)
Requirement already satisfied: tabulate in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (0.8.9)
Requirement already satisfied: pandas<1.5.0,>=0.24.2 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (1.3.4)
Requirement already satisfied: ibm-cos-sdk==2.11.* in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (2.11.0)
Requirement already satisfied: requests in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (2.26.0)
Requirement already satisfied: lomond in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm_watson_machine_learning) (0.3.3)
Requirement already satisfied: ibm-cos-sdk-s3transfer==2.11.0 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm_watson_machine_learning) (2.11.0)
Requirement already satisfied: jmespath<1.0.0,>=0.7.1 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm_watson_machine_learning) (0.10.0)
Requirement already satisfied: ibm-cos-sdk-core==2.11.0 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm_watson_machine_learning) (2.11.0)
Requirement already satisfied: python-dateutil<3.0.0,>=2.1 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.0->ibm-cos-sdk==2.11.*->ibm_watson_machine_learning) (2.8.2)
```

Data

Files

Connections

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Admission\_Predict.csv

Insert to code

The screenshot shows the IBM Watson Studio interface. The top navigation bar includes the IBM logo, a search bar, and user account information (Nallamala Akshay's Account, Dallas). The main workspace displays a Jupyter notebook titled "University Prediction". The notebook content shows a list of installed dependencies for the environment, including packages like `ibm-cos-sdk-s3transfer`, `ibm-cos-sdk-core`, `python-dateutil`, `pandas`, `numpy`, `requests`, `importlib-metadata`, and `pydantic`. Below the dependencies, there is a code cell (In [19]) that defines an `APIClient` class and initializes it with credentials for the `us-south.ml.cloud.ibm.com` endpoint. The right sidebar shows the "Data" panel with a "Files" tab, indicating that one file can be uploaded at a time, with a maximum file size of 5 GB.

## Deployment space

The screenshot shows the IBM Watson Studio interface with a Jupyter notebook titled "University Prediction". The notebook content includes a code cell (In [19]) that defines an `APIClient` class and initializes it with credentials. Below this, there is a code cell (In [20]) that defines a `guid` function to retrieve the GUID for a specific space. A third code cell (In [21]) shows the output of the `guid` function, displaying the space UID. The right sidebar shows the "Data" panel with a "Files" tab, indicating that one file can be uploaded at a time, with a maximum file size of 5 GB.

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In [19]:

```
from ibm_watson_machine_learning import APIClient
wml_credentials = {
    "url": "https://us-south.ml.cloud.ibm.com",
    "apikey": "M6xZ89SxaZnCzxoieJNwGfHxZVCyfxg11lt8mi25nB"
}
client = APIClient(wml_credentials)
```

In [20]:

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

In [21]:

```
space_uid = guid_from_space_name(client, 'models')
print("space UID = " + space_uid)
```

space UID = 0d69b6b4-0f8b-444e-8ac6-93553145f027

In [22]:

```
client.set_default_space(space_uid)
```

Out[22]: 'SUCCESS'

In [23]:

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

NAME	ASSET_ID	TYPE
default_py3.6	0062b8c9-8b7d-44a0-a9b9-46c416adcbd9	base
kernel-spark3.2-scala2.12	020d69ce-7ac1-5e68-ac1a-31189867356a	base
pytorch-onnx_1.3-py3.7-edt	069ea134-3346-5748-b513-49120e15d288	base
scikit-learn_0.20-py3.6	09c5a1d0-9c1e-4473-a344-eb7b665ff687	base
spark-mllib_3.0-scala_2.12	09facff0-90a7-5899-b9ed-1ef348aebdee	base
tensorflow-1.15.0-gpu	0b090dda-ac01-ec0a-b0a1-b0f6f77cc87a	base

Data

Files

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Admission\_Predict.csv

Insert to code

University Prediction - IBM Watson Studio

python - Why do I keep getting...

https://dataplatform.cloud.ibm.com/analytics/notebooks/v2/41de47b2-c288-49dc-b075-f563c083103d?projectid=49f6fa15-fd2e-45a6-b1e7-e...

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Format Code

In [40]:

```
software_spec_uid = client.software_specifications.get_uid_by_name("default_py3.7")
software_spec_uid
```

Out[40]: 'e4429883-c883-42b6-87a8-f419d64088cd'

In [ ]:

```
model_details = client.repository.store_model(model= rf, meta_props={
    client.repository.ModelMetaNames.NAME: "Admission_Predict",
    client.repository.ModelMetaNames.TYPE: "scikit-learn_0.23",
    client.repository.ModelMetaNames.SOFTWARE_SPEC_UID: software_spec_uid
})
model_id = client.repository.get_model_uid(model_details)
```

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To generate such links in one click, you can use the [Open in Colab](#) Chrome extension.

### Browsing GitHub Repositories from Colab

Colab also supports special URLs that link directly to a GitHub browser for any user/organization, repository, or branch. For example: