Deployments / rainfall_demo / RainfallPrediction /

rainfall_demo ✓ Deployed Online

API reference   Test

Endpoint

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/a8b06557-1fd5-4d3e-a286-4c00e8c4f80d/predictions?v

Bearer <token> ⓘ

IAM

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'})
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": [{"fields": [array_of_input_fields], "values": [array_of_values_to_be_scored, another_array_of_

response_scoring = requests.post('https://us-south.ml.cloud.ibm.com/ml/v4/deployments/a8b06557-1fd5-4d3e-a286-4c00e8c4f80d/predi
```

```
Requirement already satisfied: pyparsing!=3.0.5,>=2.0.2 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from pack
```

```python
from ibm_watson_machine_learning import APIClient
wml_credentials = {
    "url":"https://us-south.ml.cloud.ibm.com",
    "apikey":"kY2dJ2Elpode9KjkQX3HdxaYtYjcNDOda6iKVPTEdxDh"
        }
client = APIClient(wml_credentials)
```

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

```python
space_uid = guide_from_space_name(client, 'models')
print("Space UID = " + space_uid)
```

```
Space UID = 1040be98-3718-4813-94b1-2aaf574c73c1
```

```python
client.set.default_space(space_uid)
```

[7]: 'SUCCESS'

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

```
---------------------------    -----------------------------------    ----
NAME                           ASSET_ID                               TYPE
```

New Tab | IBM project/ | model id syntax in i... | IBM | PredictionRainfall (2) | New Tab | IBM Watson Studio | +

dataplatform.cloud.ibm.com/analytics/notebooks/v2/0d362278-004c-41f1-8c12-bbfbb56d7095?projectid=f09a03eb-893e-4e73-8dca-59ac26d890c7&context=cpdaas

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Projects / Rainfall Analysis / PredictionRainfall (2)

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

Run   Format Code

```python
In [ ]: import numpy as np
        import pandas as pd
        import matplotlib.pyplot as plt
        import seaborn as sns
        from sklearn import preprocessing
        import scipy.stats as stats
        from sklearn.model_selection import train_test_split
        from collections import Counter
        from imblearn.over_sampling import SMOTE
        from sklearn.metrics import accuracy_score,confusion_matrix,classification_report
        from sklearn import metrics
        from sklearn.ensemble import RandomForestClassifier
        from catboost import CatBoostClassifier
        from xgboost import XGBClassifier
        from sklearn.svm import SVC
        from sklearn.linear_model import LogisticRegression
        from sklearn.naive_bayes import GaussianNB
        from sklearn.neighbors import KNeighborsClassifier
        import joblib
```

```python
In [3]: data = pd.read_csv(r"C:\Users\Sreshta B\Downloads\weatherAUS.csv - weatherAUS.csv.csv")
```

```python
In [4]: data.head()
```

Out[4]:

	Date	Location	MinTemp	MaxTemp	Rainfall	Evaporation	Sunshine	WindGustDir	WindGustSpeed	WindDir9am	...	Humidity9am	Humidity3pm	Pressure9am	Pressure3pm	Cloud9am	Cloud3pm	Temp9a
0	2008-12-01	Albury	13.4	22.9	0.6	NaN	NaN	W	44.0	W	...	71.0	22.0	1007.7	1007.1	8.0	NaN	16
1	2008-12-02	Albury	7.4	25.1	0.0	NaN	NaN	WNW	44.0	NNW	...	44.0	25.0	1010.6	1007.8	NaN	NaN	17

Projects / RainfallPrediction

Overview   Assets   Jobs   Manage

Q Find assets   Import assets ⧉   **New asset** +

6 assets

⬚ All assets

Asset types

> ⣿ Data ① 1
> ⚗ Experiments ① 1
> ▥ Notebooks ① 3
> ◈ Models ① 1

All assets   ↻

Name	Last modified	↓
⊛ Rainfall-prediction AutoAI experiment	2 days ago Modified by you	⋮
◈ Rainfall-prediction - P1 XGB Regressor Model	2 days ago Modified by you	⋮
⣿ rainfall in india 1901-2015.csv CSV	2 days ago Modified by you	⋮
▥ AutoAI 🔒 Notebook	3 days ago Modified by you	⋮
▥ AutoAI 🔒 Notebook	3 days ago Modified by you	⋮
▥ IBMdeployment2 🔒 Notebook	6 days ago Modified by you	⋮

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