

# PNT2022TMID21280\_Efficient Water Quality Analysis & Prediction using Machine Learning.

## Train the ML Model on IBM:

The screenshot displays the IBM Watson Studio interface. At the top, the navigation bar includes the IBM Watson Studio logo, a search bar, and user information. The breadcrumb trail shows the path: Deployments / Models / WQA\_Modeling / . The main content area is titled 'WQA' with a green 'Deployed' status and an 'Online' button. Below this, there are tabs for 'API reference' and 'Test'. The 'API reference' tab is active, showing a 'Direct link' section with an 'Endpoint' field containing a long URL and a 'Bearer <token>' field with a dropdown menu set to 'IAM'. Below the 'API reference' tab, there is a 'Test' tab and a table of code snippets for different languages: cURL, Java, JavaScript, Python (highlighted), and Scala. The Python snippet shows the code for making a POST request to the endpoint, including the necessary headers and payload.

IBM Watson Studio

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Deployments / Models / WQA\_Modeling /

WQA Deployed Online

API reference Test

Direct link

Endpoint

Bearer <token>

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/4f6df3d2-3a7c-4bf3-9ca2-cc5526fd9ea2/predictions?version=20 IAM

API reference Test

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_values_to_b

response_scoring = requests.post('https://us-south.ml.cloud.ibm.com/ml/v4/deployments/4f6df3d2-3a7c-4bf3-9ca2-cc5526fd9ea2/predictions?vers
headers={'Authorization': 'Bearer ' + mltoken})
```