MACHINE LEARNING MODEL DEPLOYMENT WITH IBM WATSON

DEFINATION:

Machine learning model deployment with IBM Watson refers to the process of taking a trained machine learning model and making it accessible and operational for use in real-world applications. IBM Watson offers a suite of tools and services that facilitate this deployment process. Here's a high-level overview of the steps involved

COMPONENTS REQUIRED :

1.Train Your Model
2.Prepare Your Model
3.Choose the Watson Service
4.Deploy Your Model
5.Scalability and Monitoring
6.Integration

WORKING :

1. Train your Model: First, you need to train your machine learning model using your dataset. You can use various libraries and frameworks to create and train your model, such as scikit-learn, TensorFlow, or PyTorch.

2. Save your Model: After training, you'll want to save your trained model. This is usually done in a format like .h5 or .pkl, depending on the framework you are using.

3. Create an IBM Watson Machine Learning Service: You'll need an IBM Watson account to get started. If you don't have one, sign up for an account.

4. Deploy your Model: In the IBM Watson platform, you can create a deployment space, which is like a container for your models. Then, you can deploy your saved model to this space.

5. Set Deployment Configuration: Configure how you want your model to be deployed. For example, you can specify the resources allocated, scaling options, and runtime environment.

6. Scoring Endpoint: Once deployed, your model will have a scoring endpoint. This is the URL that you can use to make predictions using your model.

7. Integration: You can integrate this scoring endpoint into your application or system to make real-time predictions.

CODING :

```
from ibm_watson_machine_learning import APIClient
```

```
from ibm_watson_machine_learning import Deployment

wml_credentials = {
    "url": "YOUR_WML_URL",
    "apikey": "YOUR_API_KEY",
}
client = APIClient(wml_credentials)

model_details = client.repository.store_model(model="path_to_your_model.zip",
meta_props={"name": "Your Model Name"})

deployment = Deployment.create(client, model_details)

scoring_url = deployment.get_scoring_url()
print("Scoring URL:", scoring_url)
```