

## Diabetes mellitus prediction using IBM Auto AI service

Firstly we are taking Pima dataset which is taken from kaggle repository used for predicting Diabetes disease.

Steps to be followed:

- 1)Open watson studio
- 2)create a project
- 3)add auto ai experiment
- 4)create a machine learning instance
- 5)associate ML to project
- 6)Load the dataset to cloud object storage
- 7)select the prediction parameter in the dataset
- 8)train the model
- 9)deploy-we get an API
- 10)build web application using node-red.

click on watson studio in the resources list and open.

click on get started.Click on projects which is on the left side.

Next click on new project and click on create an empty project and give the name of the project.

cloud object storage service is already present in my account.So it displays automatically.

Click on create.So , your project gets created.

Click on add to project where you find Auto AI experiment ,click on that and there you give the name of the experiment.

Click on associate a machine learning service and it automatically opens a new tab.

Click on new service.Choose Machine learning from various services.Dont change anything.Click on create.

Reload and click on create.We will find machine learning instance.

Click on that machine learning instance and select associate service.

It will be asking to add data source.

Download the dataset from kaggle and just browse the downloaded csv file and click on add.

After that it will ask what do you want to predict..Here I am taking class where we can see whether a person is suffering from disease or not.

Click on run experiment.

You will have feasibility for selecting the algorithms.

Wait for the whole process and take the first pipeline then click on save as and click on model. Click on save.

Click on view in projects.

Click on promote to deployment space.

Click on new space.

We need to provide space name and click on create. Our model is saved in cloud object storage. You can select ML service and click on create.

It gives a message like machine learning model is ready. Click on close.

Here click on promote.

Click on navigation icon. There we find deployment spaces. Click on view all spaces.

There we can view our model. Select our model and click on your model.

Click on create deployment. You will observe online or batch.

Choose deployment type as online and give deployment name and then click on create.

We can see a message that asset is deployed. Click on view so that we can see our is deployed.

Click on the project.

We can see API references. And also we can see code snippets from various languages.

Click on test and give some values and click on predict.

We can see the result on the right side.

We need to create a web application using node red.

Now go to dashboard. Click on cloud foundry apps and open node red.

Click on visit app url. Go to node red. Auto

Click on new flow and disable the old flows which are existing.

Click on navigation icon and click on import. Select a file to import i.e mlautoAI.json and click on import.

The files will be added on the flow.

Click on manage which is on our dashboard.

Click on access IAM and click on API keys. Click on create IBM Cloud API key and give the name and click on create.

API will be created. Click on copy icon and API key is copied.

Come back to node red and open pre-token function node. You will find space to API key. Remove that key and paste our API key.

Click on done.

We have 2 http request. We need to double click on second http request.

We find url, remove till prediction. We should have ?---

Go to machine learning deployment tab and copy that end point and paste that before the question mark in node red.

Deploy it. You will observe a new tab with your web application. Give the values and you can see the predictions.