

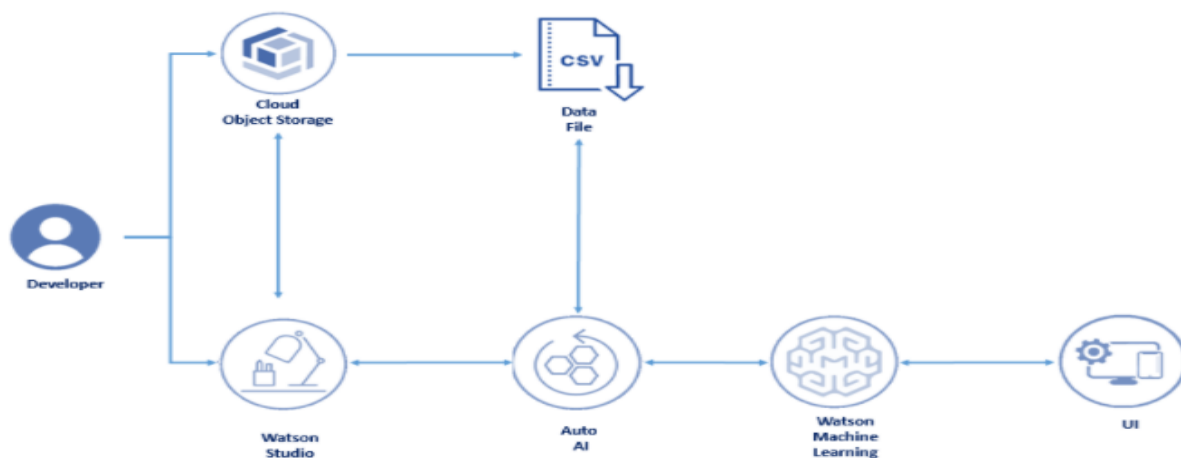
# Heart Failure Prediction Using Auto AI Feature

**Project Idea:** Cardiovascular diseases(CVDs) are the number1 cause of death globally, taking an estimate 17.9 million lives each year, which accounts for 31% of all deaths world wide.

## Solution:

Heart failure is a common event caused by CVDs and this dataset contains 9 features that can be used to predict mortality by heart failure.in this Project you need to build a model using Auto AI and build a web application where we can get the prediction of heart failure.

## Artitecture:



## Software Required:

- . IBM Cloud
- . IBM watson Studio
- . IBM watson Matchine learning
- . Node-Red
- . IBM Cloud Object Storage.

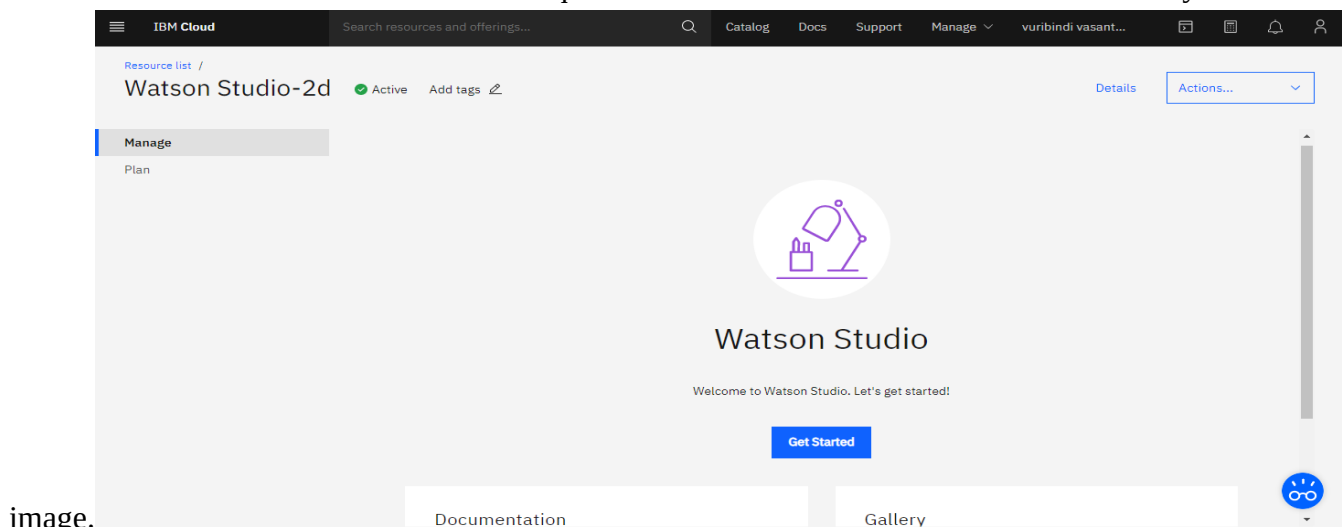
## Experimental Investigations:

- .create a IBM Watson studio
- .Create a Machine learning Model
- .Train the Model
- .Deploy The Model
- .Integrate to Node-Red Application
- .Predict the Output

### i)Create a IBM watson studio:

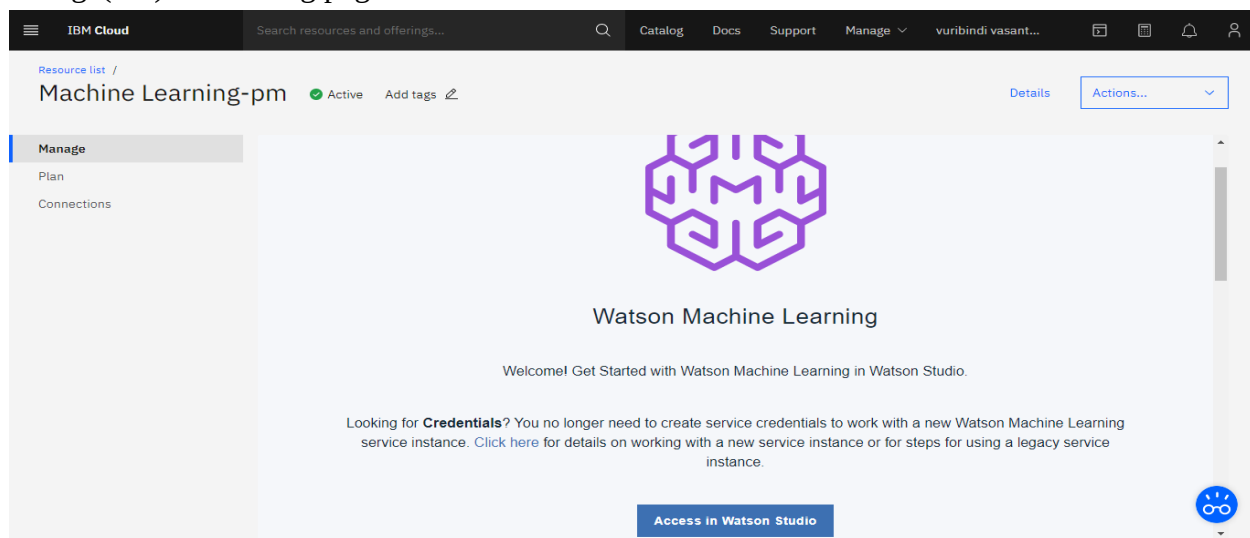
First we need to login the IBM cloud.and we need to go to the dashboard.There we need to search for the

watson service.click on that then fill the required contents then create the service.the below you find the created



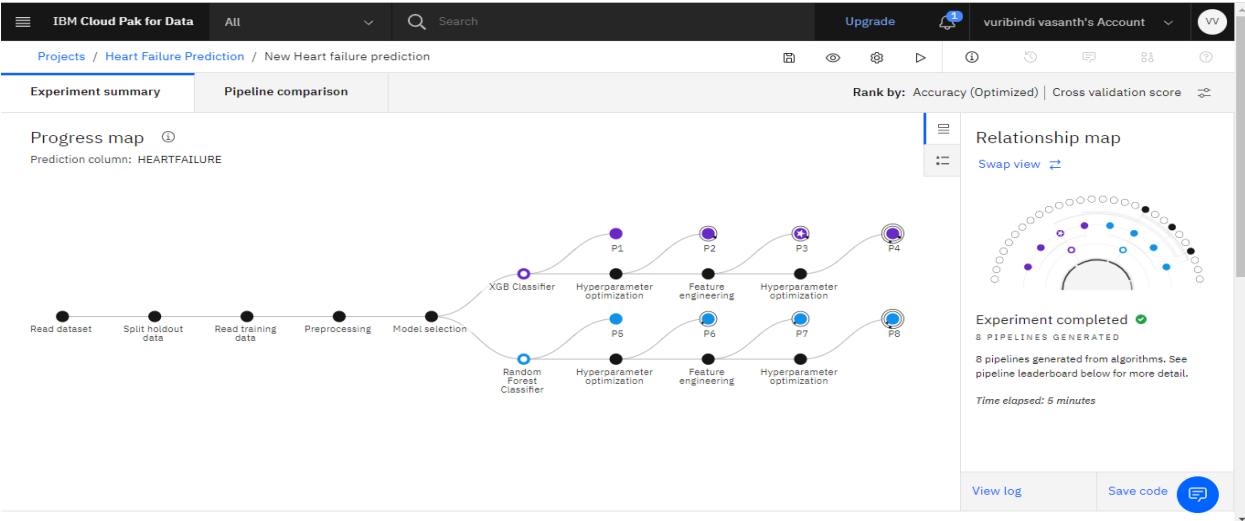
## ii)Create a Machine learning Model:

same process will be followed for this machine learning also but we need to store this in cloud object storage(cos).the landing page will be below.



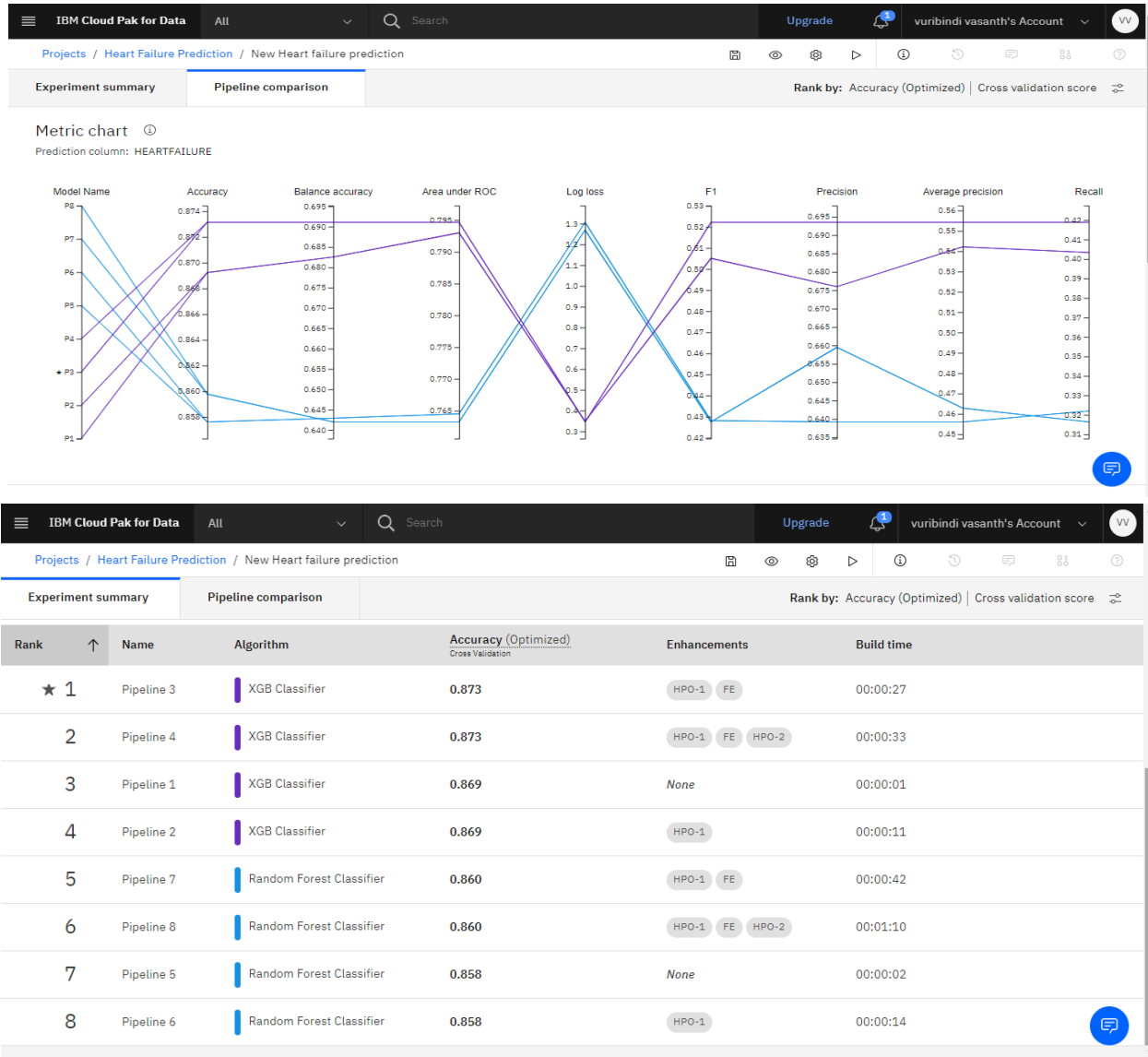
## iii)Train the model:

in this Task we need to use of the above 2 services to proceed further.The below is the Trained model of our project.



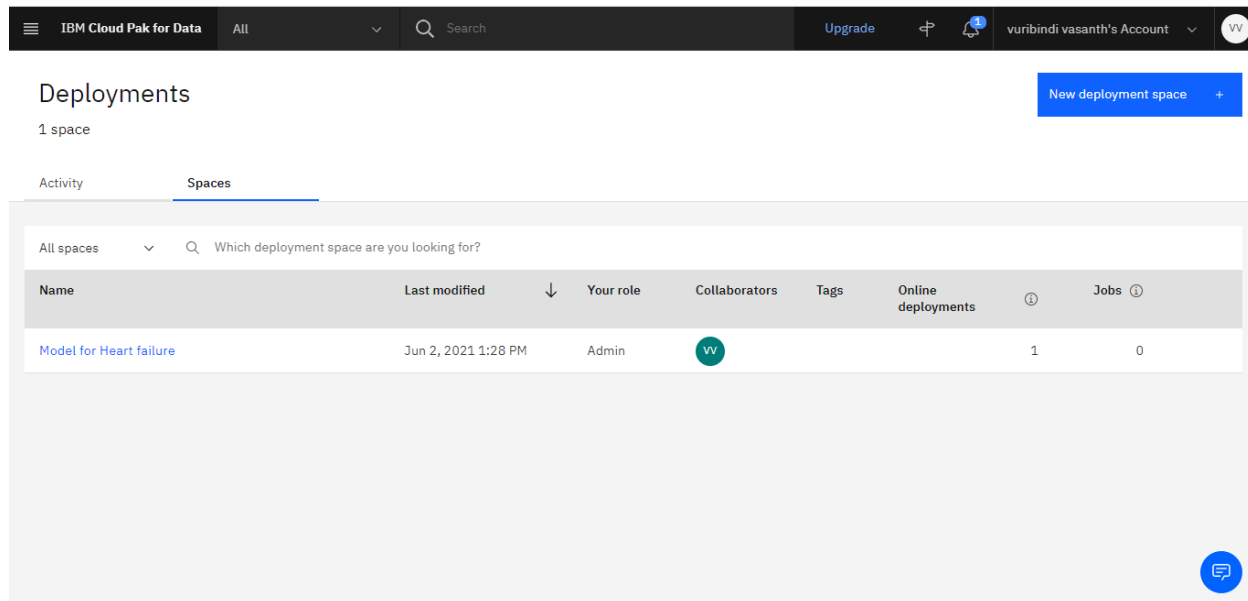
This the project summary

. Now ill mention the pipelinecomparision in it.The below mentioned fig.



#### iv)Deploy the model:

After Trained the model and pipeline comparison.we need to save as a model.And we are ready to go.Now we need to deploy that model.The deployed Model will showed like this as below.

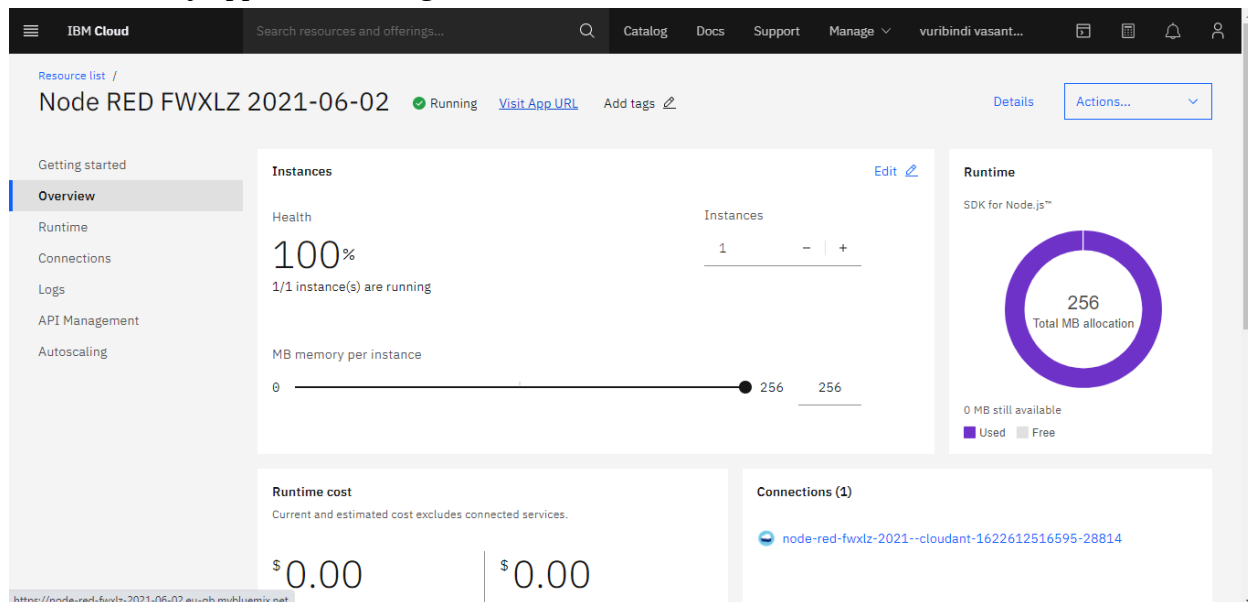


The screenshot shows the 'Deployments' page in IBM Cloud Pak for Data. The top navigation bar includes 'IBM Cloud Pak for Data', 'All', a search bar, 'Upgrade', and a user profile 'vuribindi vasant's Account'. The main heading is 'Deployments' with a 'New deployment space' button. Below this, there's a 'Spaces' tab and a table of deployment spaces. The table has columns: Name, Last modified, Your role, Collaborators, Tags, Online deployments, and Jobs. One deployment space is listed: 'Model for Heart failure', last modified on 'Jun 2, 2021 1:28 PM', with 'Admin' as the role, one collaborator (vuribindi vasant), one online deployment, and zero jobs.

Name	Last modified	Your role	Collaborators	Tags	Online deployments	Jobs
Model for Heart failure	Jun 2, 2021 1:28 PM	Admin	vuribindi vasant		1	0

#### v)Integrate to Node-Red Application:

Now,we need to integrate the deployed model to Node-red application for that we need to Create a Node-Red cloud foundry app.after creating it will shows like as mentioned below.



The screenshot shows the 'Node RED FWXLZ 2021-06-02' application overview in IBM Cloud. The top navigation bar includes 'IBM Cloud', a search bar, 'Catalog', 'Docs', 'Support', 'Manage', and a user profile 'vuribindi vasant...'. The main heading is 'Node RED FWXLZ 2021-06-02' with a 'Running' status and a 'Visit App URL' link. The left sidebar shows navigation options: 'Getting started', 'Overview' (selected), 'Runtime', 'Connections', 'Logs', 'API Management', and 'Autoscaling'. The main content area displays the 'Instances' section with a 'Health' indicator showing '100%' and '1/1 instance(s) are running'. It also shows a slider for 'MB memory per instance' set to 256. The 'Runtime' section shows 'SDK for Node.js™' with a circular progress indicator for 'Total MB allocation' at 256 MB. The 'Runtime cost' section shows '\$0.00' for current and estimated cost. The 'Connections (1)' section shows a single connection: 'node-red-fwxlz-2021--cloudant-1622612516595-28814'.

. Now we need to click on visit UrL we need to landed to the below pagesas shown.

