

1. INTRODUCTION:-

➤ 1.1 Overview:-

Breast cancer represents one of the diseases that make a high number of deaths every year. It is the most common type of all cancers and the main cause of women's deaths worldwide. and the second highest in terms of mortality rates. Diagnosis of breast cancer is performed when an abnormal lump is found (from self-examination or x-ray) or a tiny speck of calcium is seen (on an x-ray). After a suspicious lump is found, the doctor will conduct a diagnosis to determine whether it is cancerous and, if so, whether it has spread to other parts of the body.

➤ 1.2 Purpose:-

The purpose of this project is to predict a breast cancer in the body. and analysing the breast cancer.

2. LITERATURE SURVEY:-

➤ 2.1 Existing Problem:-

Finding solutions for breast cancer the growing world population has become a hot topic for health organizations, entrepreneurs and philanthropists. These solutions range from changing the way we go fast in our health organisations to remove the breast cancer. To make. Hence, it is necessary that we analyse the breast cancer risk and act faster rather than repenting later.

➤ 2.2 Proposed Solution:-

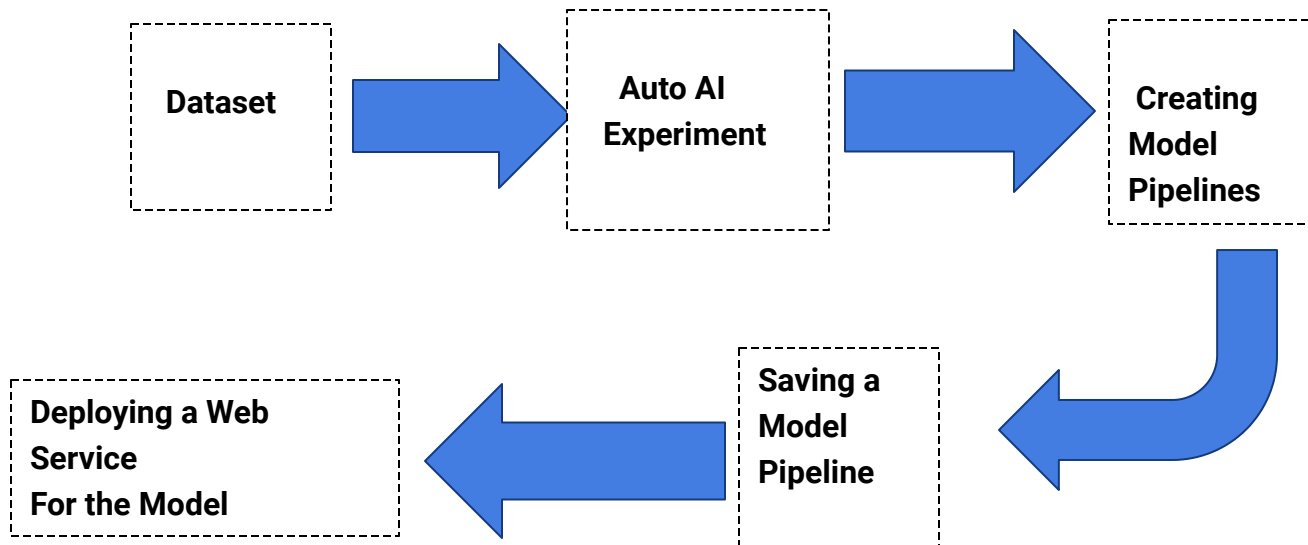
The main aim of this project is to create an appropriate machine learning model to analyse and predict the breast cancer in a body, So for that we will build a Machine Learning model to predict the breast cancer in body using IBM Watson, AutoAI Machine Learning Service. The model is deployed on IBM cloud to get scoring end point which will

be used as API in mobile apps or web app building. We will develop a web application using node red service. We will use the scoring end point to give user input values to the deployed model.

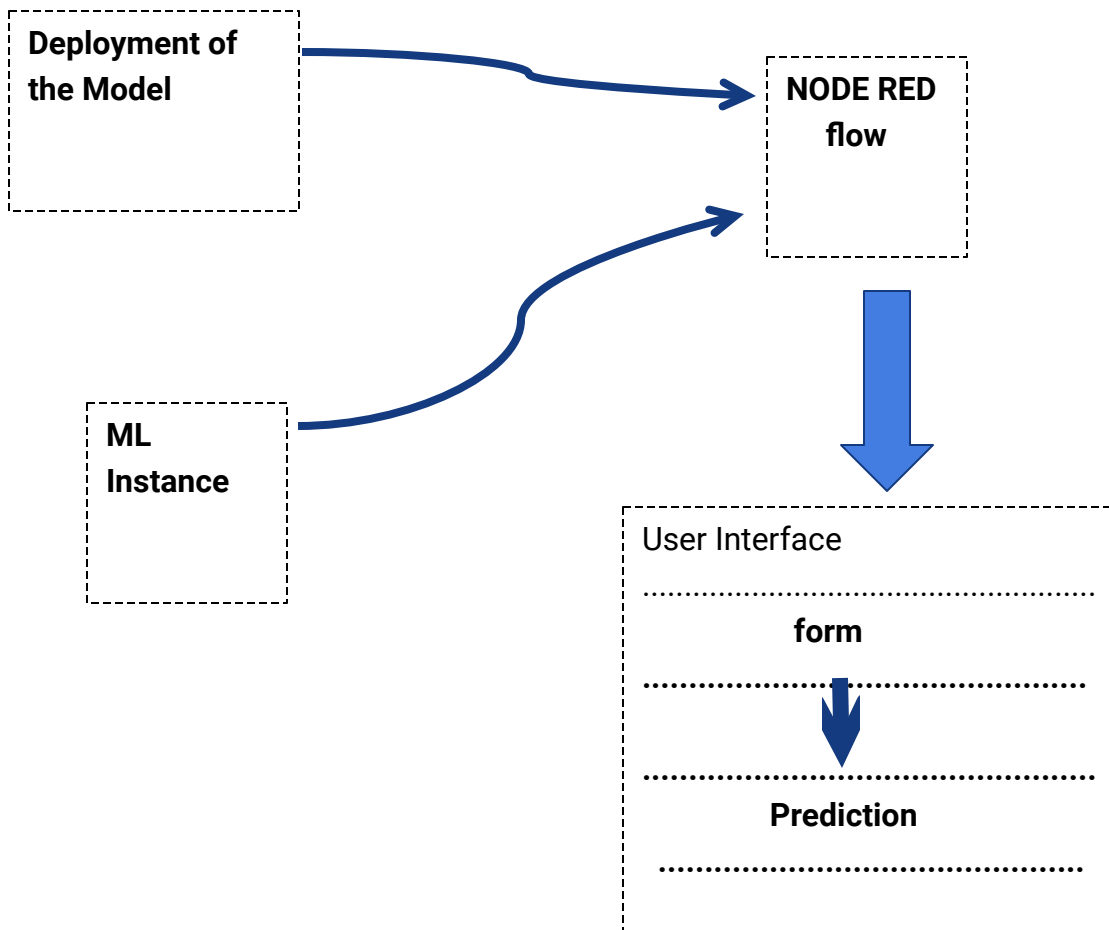
The model prediction will be showcased on User Interface.

3.THEORETICAL ANALYSIS-

➤ 3.1 Block Diagram:-



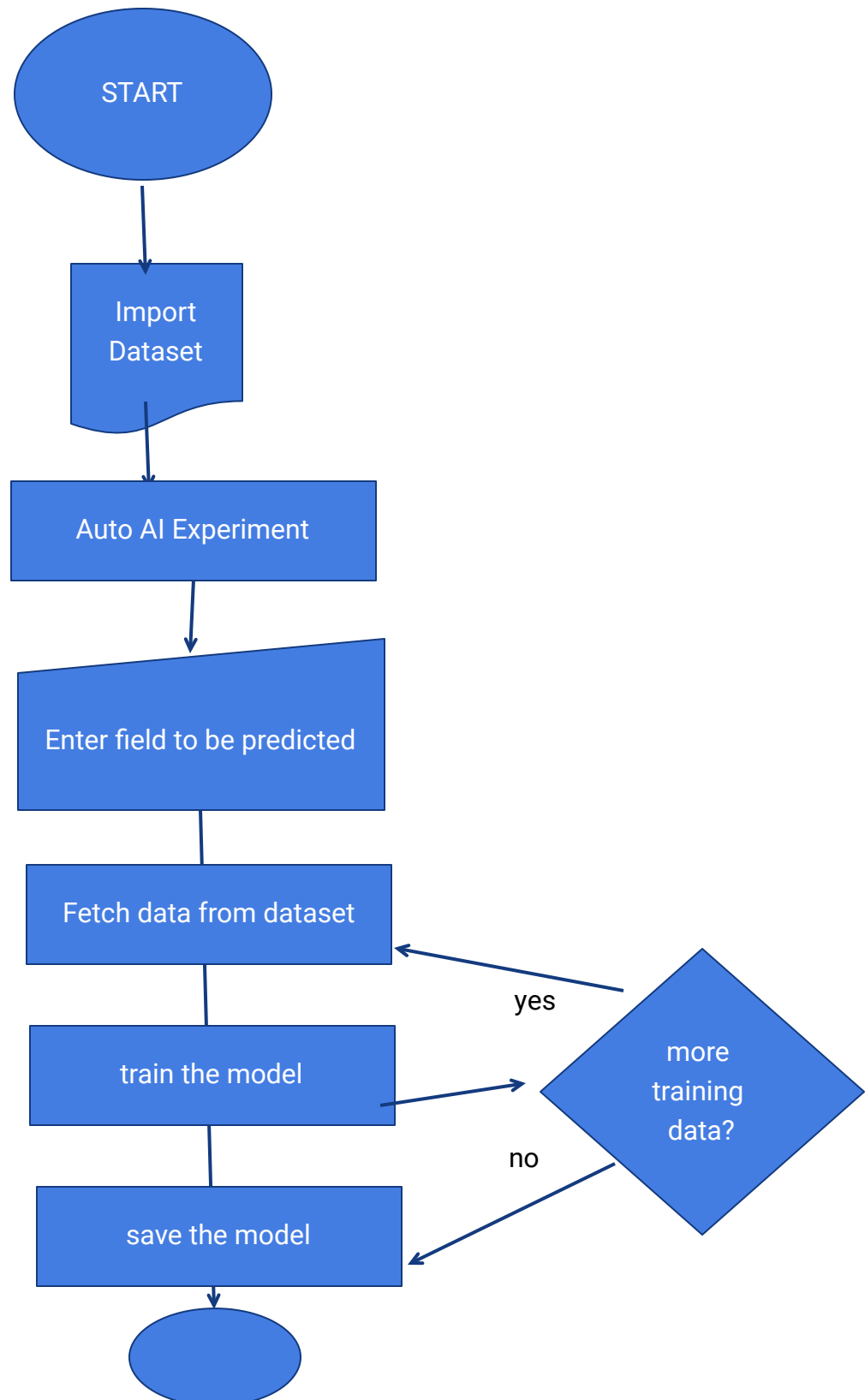
➤ 23. Software Designing:-

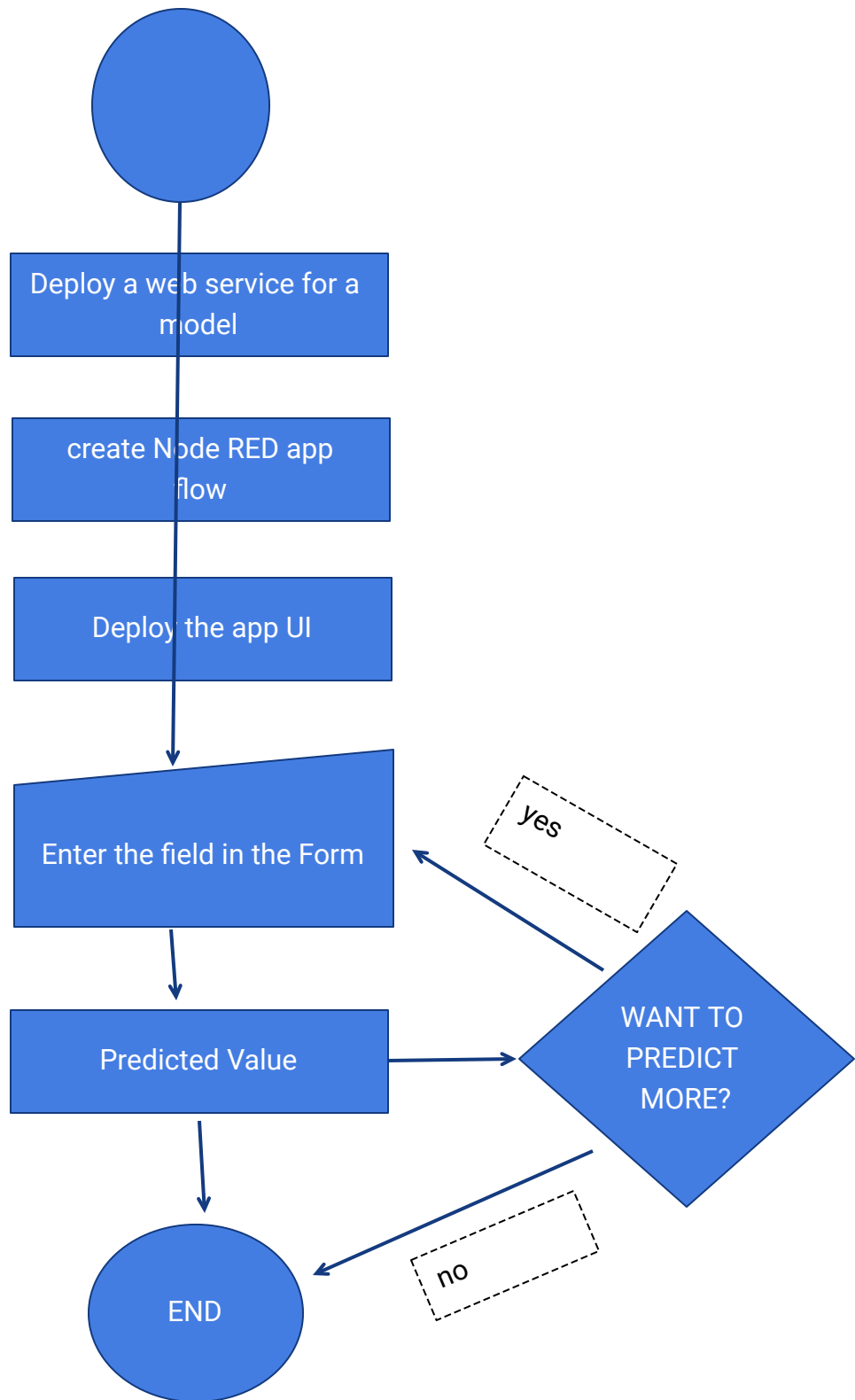


4. EXPERIMENTAL INVESTIGATIONS:-

These Dataset consists of prediction of breast cancer in world. This was recorded for people in the world along with the population. These data gives an idea of the Breast cancer Patient in the world. Requirements of this model depending upon its demography and can be used to learn the requirement trends.

5.FLOW CHART:-





6. Result:-

The model formed using auto AI services in IBM Watson studio can be used to predict the Breast cancer in human body. It is based on populations. Generally, this type of symptoms is shown in Women. The Node RED app gives a User-Friendly interface to input the input value and get prediction.

7. Advantages and Disadvantages:-

➤ Advantages:-

1. With the help of this UI, Efficient prediction of blood cancer that can be done in a easy way.
2. The prediction gives good insights about the risk of blood cancer in the body.
3. Future planning can be done to reduce the blood cancer patients.

➤ Disadvantages:-

1. The model may need to be re-trained in case of decrementation of patients.
2. Many times we do face a situation where we find an imbalance in data which leads to poor accuracy of models.

8. Applications:-

This solution can be used by health departments to reduce the blood cancer patients in the world and analysing the data of the blood cancer patients.

9.Conclusion:-

The model is deployed successfully and was used to build a web UI using Node RED services. The model gave satisfactory results and the Web UI is working properly.

10.Future scope:-

The solution can be improved for more heuristic analysis and can be further extended to predict more detailed requirements in future. These model will be more helpful to predict and analysing the breast cancer patients according to growing up of the populations in the world.

11.Bibliography/ References:

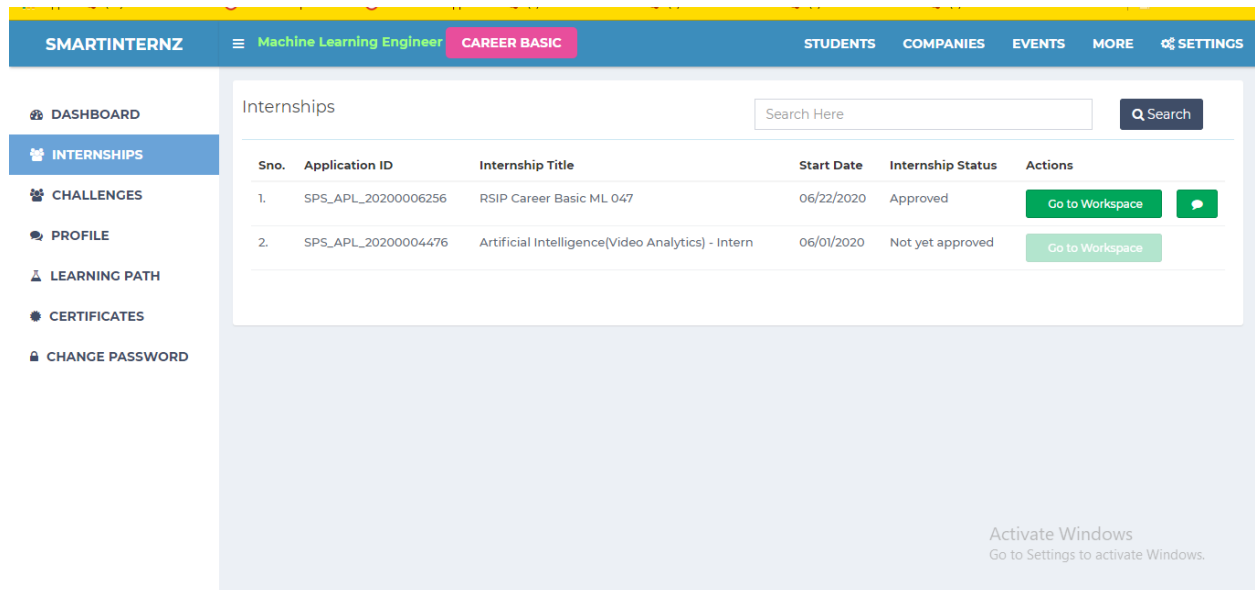
➤ Source of Dataset:

✓ <https://www.kaggle.com/merishnasuwal/breast-cancer-prediction-dataset>

12.APPENDIX:-

Screenshots

A.1-Internship Project-



The screenshot shows the SMARTINTERNZ web application interface. The header is blue with the logo 'SMARTINTERNZ' and a navigation menu including 'Machine Learning Engineer', 'CAREER BASIC', 'STUDENTS', 'COMPANIES', 'EVENTS', 'MORE', and 'SETTINGS'. The sidebar on the left contains links for 'DASHBOARD', 'INTERNSHIPS' (highlighted), 'CHALLENGES', 'PROFILE', 'LEARNING PATH', 'CERTIFICATES', and 'CHANGE PASSWORD'. The main content area is titled 'Internships' and features a search bar. Below the search bar is a table with the following data:

Sno.	Application ID	Internship Title	Start Date	Internship Status	Actions
1.	SPS_APL_20200006256	RSIP Career Basic ML 047	06/22/2020	Approved	Go to Workspace Chat
2.	SPS_APL_20200004476	Artificial Intelligence[Video Analytics] - Intern	06/01/2020	Not yet approved	Go to Workspace

At the bottom right of the page, there is a watermark that reads 'Activate Windows Go to Settings to activate Windows.'

[Go to Git Repository](#)

[Go to Writer](#)

[Go to Slack Channel](#)

3 Days 19:6:3

Note: Use password **t59Jkh6** to get access for writer

PROJECT DETAILS

TASK & PROGRESS

MENTOR REVIEW

Team Tasks ☐ My Tasks

Data Collection

BACKLOG

IN-PROCESS

REVIEW

COMPLETE

TSK-52859

SR

Download Dataset /
Create Dataset

Progress(%):

100

[Comment](#)

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[Go to Git Repository](#)[Go to Writer](#)[Go to Slack Channel](#)**3 Days 8:6:14**

Note: Use password **ts9Jkh6** to get access for writer

PROJECT DETAILS

– Breast Cancer Risk Prediction Using IBM Auto AI

+ Data Collection

+ IBM Cloud Account

+ Model Building

+ Application Building

TASK & PROGRESS

MENTOR REVIEW

INTERMEDIATE

Breast Cancer Risk Prediction Using IBM Auto AI

Category: Machine Learning

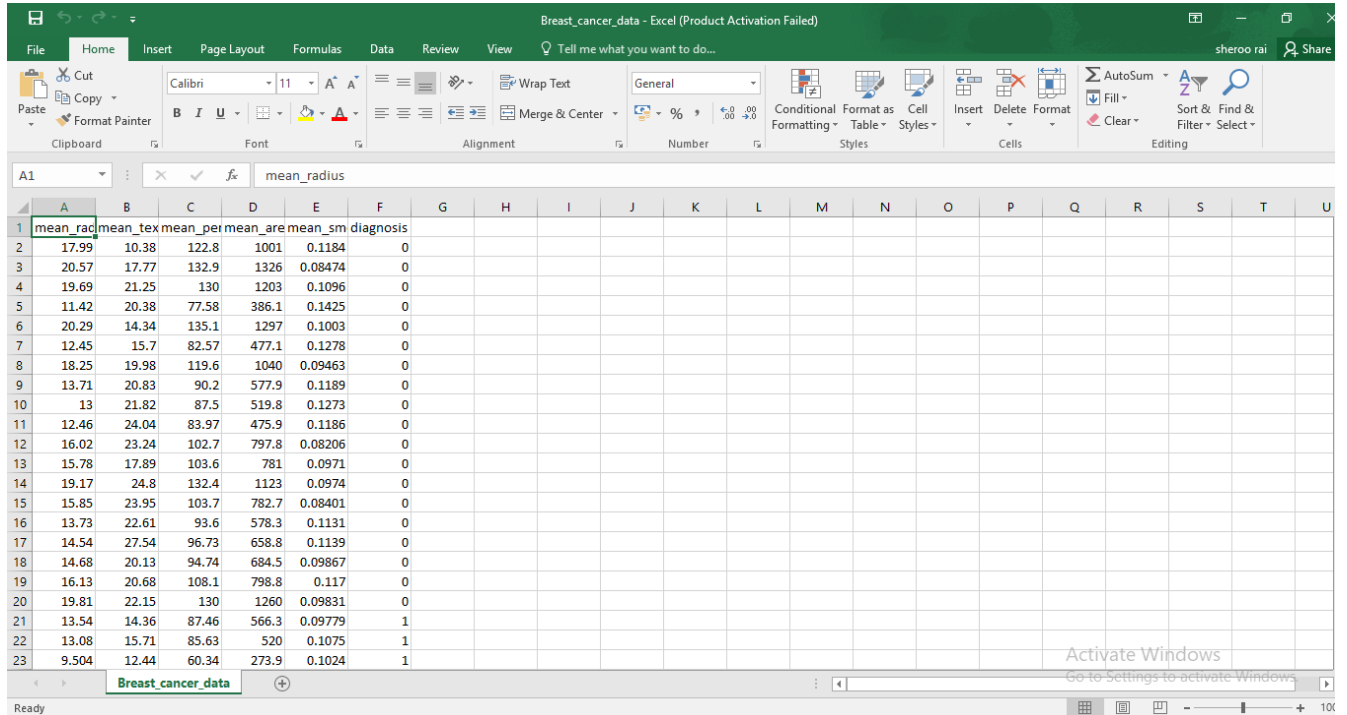
Skills Required:

Python,Python For Data Analysis,Machine Learning,IBM Cloud,IBM Watson

Project Description:

Breast cancer is one of the main causes of cancer death worldwide. Early diagnostics significantly increases the chances of correct treatment and survival, but this process is tedious and often leads to a disagreement between pathologists. Computer-aided diagnosis systems showed potential for improving the diagnostic accuracy. But early detection and prevention bands significantly reduce the chances of death. It is important to detect breast cancer as early as possible.

➤ A.2 Data Collection:-



Breast_cancer_data - Excel (Product Activation Failed)

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... sheroo rai Share

Clipboard Font Alignment Number Styles Cells Editing

mean_radius

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	mean_rad	mean_tex	mean_per	mean_are	mean_sm	diagnosis															
2	17.99	10.38	122.8	1001	0.1184	0															
3	20.57	17.77	132.9	1326	0.08474	0															
4	19.69	21.25	130	1203	0.1096	0															
5	11.42	20.38	77.58	386.1	0.1425	0															
6	20.29	14.34	135.1	1297	0.1003	0															
7	12.45	15.7	82.57	477.1	0.1278	0															
8	18.25	19.98	119.6	1040	0.09463	0															
9	13.71	20.83	90.2	577.9	0.1189	0															
10	13	21.82	87.5	519.8	0.1273	0															
11	12.46	24.04	83.97	475.9	0.1186	0															
12	16.02	23.24	102.7	797.8	0.08206	0															
13	15.78	17.89	103.6	781	0.0971	0															
14	19.17	24.8	132.4	1123	0.0974	0															
15	15.85	23.95	103.7	782.7	0.08401	0															
16	13.73	22.61	93.6	578.3	0.1131	0															
17	14.54	27.54	96.73	658.8	0.1139	0															
18	14.68	20.13	94.74	684.5	0.09867	0															
19	16.13	20.68	108.1	798.8	0.117	0															
20	19.81	22.15	130	1260	0.09831	0															
21	13.54	14.36	87.46	566.3	0.09779	1															
22	13.08	15.71	85.63	520	0.1075	1															
23	9.504	12.44	60.34	273.9	0.1024	1															

Breast_cancer_data

Ready

Activate Windows
Go to Settings to activate Windows

► IBM Cloud Service & Model Building:-

The screenshot displays the IBM Cloud user interface. At the top, a yellow header bar contains the IBM Cloud logo, a search bar, and navigation links for Catalog, Docs, Support, and Manage. Below the header, a dark sidebar on the left lists navigation options: Profile, Login settings, and Notifications. The main content area is titled 'User preferences' and contains two sections: 'Account user information' and 'Contact information'. The 'Account user information' section shows fields for Name (sheroo ray), Language (Browser detects English), User ID (sherooray1997@gmail.com), and Password (masked with asterisks). The 'Contact information' section shows fields for Email (sherooray1997@gmail.com), Primary phone number (None), and Alternate phone number (None). Both sections have an 'Edit' link. At the bottom right, there is a 'Activate Windows' watermark.

IBM Cloud

Search resources and offerings...

Catalog Docs Support Manage sheroo ray's Account

Profile

Login settings

Notifications

User preferences

Account user information [Edit](#)

Name
sheroo ray

Language
Browser detects English.

User ID
sherooray1997@gmail.com

Password

Contact information [Edit](#)

Email
sherooray1997@gmail.com

Primary phone number
None

Alternate phone number
None

Activate Windows

Go to Settings to activate Windows.

IBM Cloud

Search resources and offerings...

Q

Catalog

Docs

Support

Manage

sheroo ray's Account

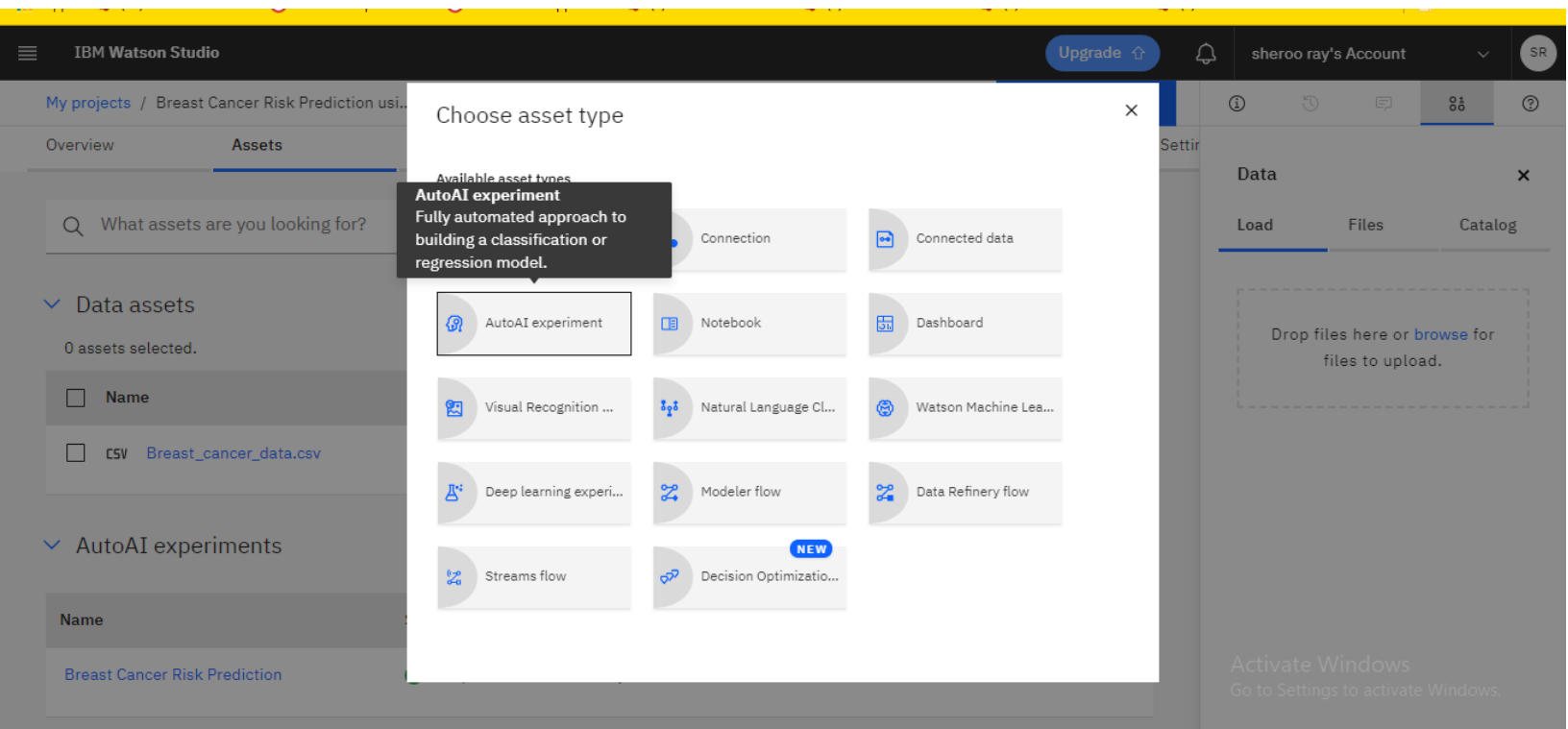
Resource list

Create resource

Name	Group	Location	Status	Tags
<div>Filter by name or IP address...Filter by group or org...Filter...Filter...Filter...</div>				
Clusters (0)				
Cloud Foundry apps (1)				
Cloud Foundry services (1)				
Services (4)				
Continuous Delivery	Default	Dallas	Active	—
Watson Studio-SR	Default	London	Active	—
node-red-nbaoz-cloudant-1592902139716	Default	Sydney	Active	—
pm-20-if	Default	London	Active	cpda...
Storage (1)				
Network (0)				
Cloud Foundry enterprise environments (0)				

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FEEDBACK



IBM Watson Studio

Upgrade

sheroo ray's Account

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My projects / Breast Cancer Risk Prediction usi... / Breast Cancer Risk Prediction

Experiment summary

Pipeline comparison

Rank by: Accuracy (Optimized) Score: Cross validation Holdout

Prediction column: diagnosis

FEATURE TRANSFORMERS

PIPELINES

TOP ALGORITHMS

Breast_cancer_dat...

Activate Windows
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SR

My projects / Breast Cancer Risk Prediction usi... / Breast Cancer Risk Prediction

Experiment summary

Pipeline comparison

Rank by: Accuracy (Optimized) Score: Cross validation Holdout

Rank	Name	Algorithm	Accuracy (Optimized)	Enhancements	Build time
> 1	Pipeline 8	XGB Classifier	0.939	HPO-1 FE HPO-2	00:00:14
> 2	Pipeline 4	Gradient Boosting Classifier	0.938	HPO-1 FE HPO-2	00:00:14
> 3	Pipeline 7	XGB Classifier	0.934	HPO-1 FE	00:00:58
> 4	Pipeline 6	XGB Classifier	0.928	HPO-1	00:00:14
> 5	Pipeline 2	Gradient Boosting Classifier	0.928	HPO-1	00:00:05
> 6	Pipeline 3	Gradient Boosting Classifier	0.926	HPO-1 FE	00:00:38
> 7	Pipeline 1	Gradient Boosting Classifier	0.922	None	00:00:01
> 8	Pipeline 5	XGB Classifier	0.914	None	00:00:01

Save as Model Notebook

Activate Windows Go to Settings to activate Windows.

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My projects / Breast Cancer Risk Prediction usi... / Breast Cancer Risk Prediction - P... / breast

Enter input data

44.6

mean_perimeter

55

mean_area

44

mean_smoothness

66.9

Predict

```
{
  "predictions": [
    {
      "fields": [
        "prediction",
        "probability"
      ],
      "values": [
        0,
        [
          0.9253678917884827,
          0.07463210821151733
        ]
      ]
    }
  ]
}
```

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My projects / Breast Cancer Risk Prediction usi...

Launch IDE

Add to project

Overview

Assets

Environments

Jobs

Deployments

Access Control

Se

What assets are you looking for?

▼ Data assets

0 assets selected.

<input type="checkbox"/>	Name	Type	Created by	Last modified	↓
<input type="checkbox"/>	CSV Breast_cancer_data.csv	Data Asset	sheroo ray	Jun 23, 2020, 12:49 PM	

▼ AutoAI experiments

New AutoAI experiment +

Name	Status	Model type	Last modified
Breast Cancer Risk Prediction	Completed	Binary Classification	Jun 23, 2020, 01:32 PM

Data

Load

Files

Catalog

Drop files here or browse for files to upload.

Activate Windows
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➤ Application Building and Web UI:-

The screenshot displays the IBM Cloud Developer Catalog interface. The top navigation bar includes the IBM Cloud logo, a search bar for resources and offerings, and links to Catalog, Docs, Support, and Manage. The user's account name, 'sheroo ray's Ac...', is visible on the right. The left sidebar contains filters for Catalog, Deployment target (IBM Kubernetes Service, Red Hat OpenShift), and Provider (IBM, Community, Third party). The main content area shows a grid of starter kits, each with an icon, title, description, and deployment options. The 'Node-RED App' is highlighted with a blue border. A 'FEEDBACK' button is located on the right side of the catalog grid. At the bottom, a Windows notification for 'Activate Windows' is visible.

IBM Cloud Search resources and offerings... Catalog Docs Support Manage sheroo ray's Ac...

Search the catalog...

Node-RED App
IBM • Developer Tools
Start building your next Node-RED app on IBM Cloud.
Starter kits • IBM Kubernetes Service • Red Hat OpenShift

Node.js Express App
IBM • Developer Tools
Start building your next Node.js Express app on IBM Cloud.
Starter kits • IBM Kubernetes Service • Red Hat OpenShift

Python Django App
IBM • Developer Tools
Start building your next Python Django app on IBM Cloud.
Starter kits • IBM Kubernetes Service • Red Hat OpenShift

Python Flask App
IBM • Developer Tools
Start building your next Python Flask app on IBM Cloud.
Starter kits • IBM Kubernetes Service • Red Hat OpenShift

Swift Kitura App
IBM • Developer Tools
Start building your next Swift Kitura app on IBM Cloud.
Starter kits • IBM Kubernetes Service • Red Hat OpenShift

Visual Recognition Node.js App
IBM • AI / Machine Learning
Use deep learning algorithms to analyze images that can give you insights into your visual content.
Starter kits • IBM Kubernetes Service • Red Hat OpenShift

FEEDBACK

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<https://cloud.ibm.com/developer/appservice/starter-kits/59c9d5bd-4d31-3611-897a-f94eea80dc9f/nodered>

IBM Cloud

Search resources and offerings...

CatalogDocsSupportManage▼sheroo ray's Account

Resource list /

Node RED NBAOZ Running [Visit App URL](#) [Add tags](#)

DetailsActions...

Getting started

Overview

Runtime

Connections

Logs

API Management

Autoscaling

Availability Monitoring

Instances

Health

100%

1/1 instance(s) are running

MB memory per instance

0256256

Instances

1

Runtime

SDK for Node.js™

256

Total MB allocation

0 MB still available

UsedFree

Runtime cost

Current and estimated cost excludes connected services.

\$0.00

Current charges for billing period

\$0.00

Estimated total for billing period
Jun 1, 2020 - Jun 30, 2020

Connections (1)

node-red-nbaoz-cloudant-1592902139716-21765

Create connection →

Activate Windows
Go to Settings to activate Windows.

FEEDBACK

<https://node-red-nbaoz.eu-gb.mybluemix.net> [Details](#)

Node-RED on IBM Cloud

Node-RED

Flow-based programming for the Internet of Things

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.

This instance is running as an IBM Cloud application, giving it access to the wide range of services available on the platform.

More information about Node-RED, including documentation, can be found at nodered.org.

[Go to your Node-RED flow editor](#)

[Learn how to customise Node-RED](#)

Activate Windows
Go to Settings to activate Windows.

IBM Cloud

Search resources and offerings...

CatalogDocsSupportManagesheroo ray's Account

Resource list /

pm-20-jfActivecpdaas

DetailsActions...

Manage

Service credentials

Plan

Connections

Service credentials

You can generate a new set of credentials for cases where you want to manually connect an app or external consumer to an IBM Cloud™ service. [Learn more](#)

Search credentials...

New credential+

Key name	Date created
wdp-writer	JUN 23, 2020 - 12:58:49 PM

```
{  "apikey": "Q0dQLIDyWxUgR4pF03lxLP0mtNfmJ-E1CCVoMr8d80_",  "iam_apikey_description": "Auto-generated for key e8f598ca-4b9e-4ab3-ba01-56b948d4ad41",  "iam_apikey_name": "wdp-writer",  "iam_role_crn": "crn:v1:bluemix:public:iam:::serviceRole:Writer",  "iam_serviceid_crn": "crn:v1:bluemix:public:iam-identity::a/0f80d39913b24708a82c46fc993b9638::serviceid:ServiceId-17108c28-9eb8-401a-af8f-7075f9bdc889",  "instance_id": "2d51206d-d636-4a6d-8348-5c806a2cd38c",  "url": "https://eu-gb.ml.cloud.ibm.com"}
```

Activate Windows
Go to Settings to activate Windows.

FEEDBACK

```
wml_credentials = {
    "instance_id" : "icp",
    "url" : "https://111.22.333.444",
    "username" : "WMOQRS",
    "password" : "TUVWXYZ"
}
client = WatsonMachineLearningAPIClient( wml_credentials )
```

REST API

See: [Watson Machine Learning REST API](#)

To use the Watson Machine Learning REST API, you need to obtain an IBM Cloud Identity and Access Management (IAM) token. In this example, you would just supply your API key in place of the example key.

cURL example

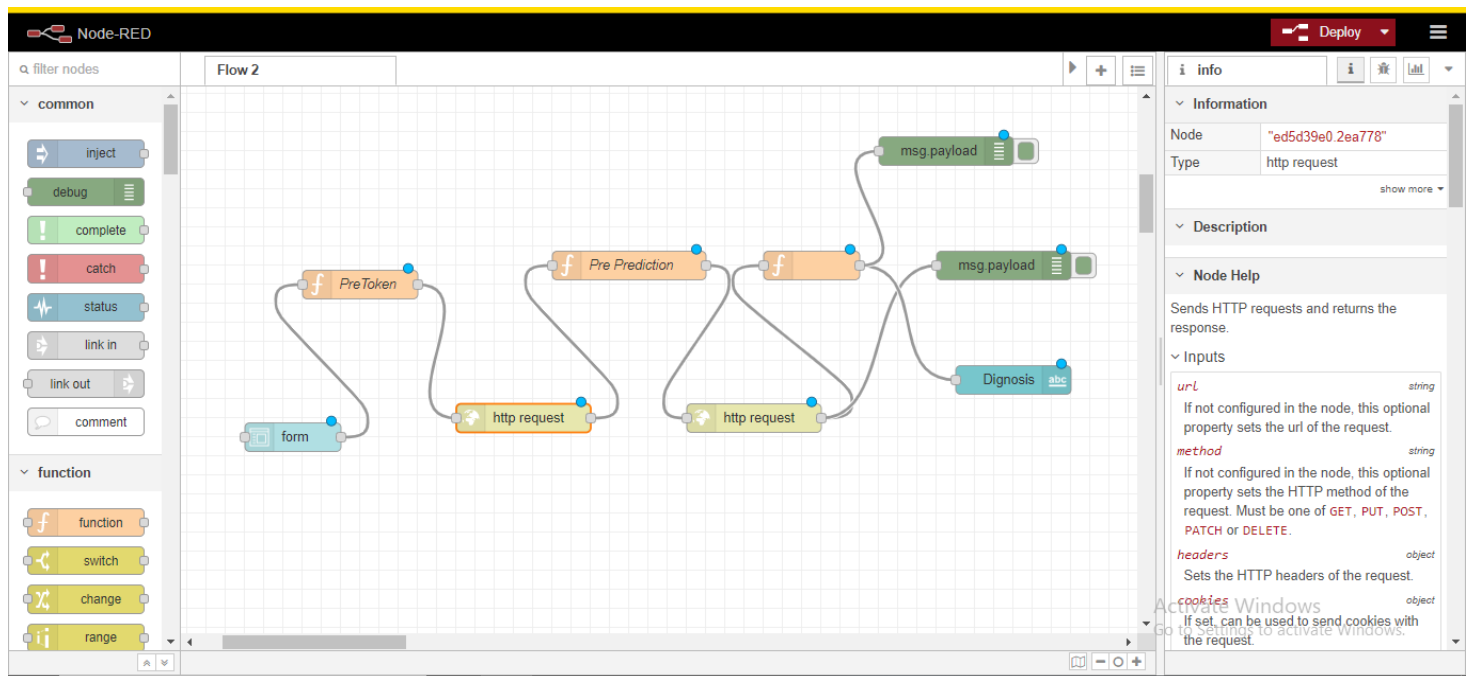
```
curl -k -X POST \
--header "Content-Type: application/x-www-form-urlencoded" \
--header "Accept: application/json" \
--data-urlencode "grant_type=urn:ibm:params:oauth:grant-type:apikey" \
--data-urlencode "apikey=123456789" \
"https://iam.bluemix.net/identity/token"
```

Python example

```
import requests

# Paste your Watson Machine Learning service apikey here
# Use the rest of the code sample as written
apikey = "123456789"
```

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Node-RED

Deploy

filter nodes

Flow 2

common

inject

debug

complete

catch

status

link in

link out

comment

function

switch

change

range

PreToken

form

User Settings

Close

View

Nodes

Install

Keyboard

sort:

🔼

 a-z recent ↺

Palette

node-red-dashboard

A set of dashboard nodes for Node-RED

2.22.1 1 month ago

installed

node-red-node-ui-list

Node-RED Dashboard UI widget node for simple list

0.2.5 5 months ago

install

node-red-node-ui-vega

Node-RED UI widget node for Vega visualization grammar

0.1.2 8 months ago

install

node-red-node-ui-table

Table UI widget node for Node-RED Dashboard

0.3.1 3 months ago

install

node-red-node-ui-microphone

A Node-RED ui node to record audio on a dashboard.

0.1.4 1 month ago

install

info

Information

Node

"3c2e1670.3a554a"

Type

ui_form

show more

Description

Node Help

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IBM Watson Studio

Upgrade

sheroo ray's Account

SR

[My projects](#) / [Breast Cancer Risk Prediction usi...](#) / [Breast Cancer Risk Prediction - P...](#) / breast

breast

Overview

Implementation

Test

Implementation

[View API Specification](#)

Scoring End-point	https://eu-gb.ml.cloud.ibm.com/v4/deployments/15844736-fa9b-46a6-8c54-5815c9a3bd4e/predictions
Authorization: Bearer <token>	Review the WML authentication documentation for details about generating IAM tokens.
ML-Instance-ID	The "ML-Instance-ID" HTTP header must be populated with the WML instance id, which can be obtained as described here
Content-type: application/json	Required if the request body is sent in JSON format.

Code Snippets

cURL

Java

JavaScript

Python

Scala

Activate Windows

Go to Settings to activate Windows

<https://eu-gb.dataplatform.cloud.ibm.com/ml/deployments/15844736-fa9b-46a6-8c54-5815c9a3bd4e?projectId=ddc3e2e0-c665-4e32-93a7-8cae1fb795c6&mlInstanceGuid=2d51206d-d636-4a6d-8348-5c806a2cd38c&context=wdp&wmlv4=true#>

Breast Cancer Risk Prediction using
IBM Auto AI

mean_radius *

333

mean_texture *

44

mean_perimeter *

33

mean_area *

55

mean_smoothness *

66

SUBMIT

CANCEL

Diagnosis

0.07463210821151733

A.2 Flow.Json file Source Code:-

```
[{"id":"80fc8dba.aa05a","type":"tab","label":"Flow
2","disabled":false,"info":""},{id:"acfa63c0.1b9b4","type":"ui_group","z":"","name":"Breast
Cancer          Risk          Prediction          using          IBM          Auto
AI","tab":"a76f3181.b9c51","order":1,"disp":true,"width":"6","collapse":false},{id:"a76f318
1.b9c51","type":"ui_tab","z":"","name":"Home","icon":"dashboard","disabled":false,"hidden":f
alse},{id:"1e9d2dab.9fad22","type":"ui_base","theme":{"name":"theme-light","lightThem
e":{"default":"#0094CE","baseColor":"#2633e8","baseFont":"Arial          Black,Arial
Black,Gadget,sans-serif","edited":true,"reset":false},"darkTheme":{"default":"#097479","b
aseColor":"#f0f0f0","baseFont":"Arial,Arial,Helvetica,sans-serif","edited":true,"reset":fals
e},"customTheme":{"name":"Untitled          Theme
1","default":"#4B7930","baseColor":"#4B7930","baseFont":"-apple-system,BlinkMacSyst
emFont,Segoe          UI,Roboto,Oxygen-Sans,Ubuntu,Cantarell,Helvetica
Neue,sans-serif"},"themeState":{"base-color":{"default":"#0094CE","value":"#2633e8","ed
ited":true},"page-titlebar-backgroundColor":{"value":"#2633e8","edited":false},"page-bac
groundColor":{"value":"#fafafa","edited":false},"page-sidebar-backgroundColor":{"value
":"#000000","edited":false},"group-textColor":{"value":"#6b74ef","edited":false},"group-bo
rderColor":{"value":"#ffffff","edited":false},"group-backgroundColor":{"value":"#ffffff","edi
ted":false},"widget-textColor":{"value":"#111111","edited":false},"widget-backgroundCol
or":{"value":"#2633e8","edited":false},"widget-borderColor":{"value":"#ffffff","edited":fals
e},"base-font":{"value":"Arial          Black,Arial
Black,Gadget,sans-serif"},"angularTheme":{"primary":"indigo","accents":"blue","warn":"re
d","background":"grey"},"site":{"name":"Node-RED
```

```
Dashboard","hideToolbar":"false","allowSwipe":"false","lockMenu":"false","allowTempThe
me":"true","dateFormat":"DD/MM/YYYY","sizes":{"sx":48,"sy":48,"gx":6,"gy":6,"cx":6,"cy":6,"p
x":0,"py":0}}},{ "id":"3c2e1670.3a554a","type":"ui_form","z":"80fc8dba.aa05a","name":"","lab
el":"","group":"acfa63c0.1b9b4","order":1,"width":0,"height":0,"options":[{"label":"mean_rad
ius","value":"mr","type":"number","required":true,"rows":null}, {"label":"mean_texture","valu
e":"mt","type":"number","required":true,"rows":null}, {"label":"mean_perimeter","value":"mp"
,"type":"number","required":true,"rows":null}, {"label":"mean_area","value":"ma","type":"num
ber","required":true,"rows":null}, {"label":"mean_smoothness","value":"ms","type":"number"
,"required":true,"rows":null}], "formValue":{"mr":"","mt":"","mp":"","ma":"","ms":""}, "payload":"","
submit":"submit","cancel":"cancel","topic":"","x":250,"y":1060,"wires":[["217d2375.57153c"
]], {"id":"217d2375.57153c","type":"function","z":"80fc8dba.aa05a","name":"PreToken","fu
nc":"global.set(\"mr\",msg.payload.mr)\nglobal.set(\"mt\",msg.payload.mt)\nglobal.se
t(\"mp\",msg.payload.mp)\nglobal.set(\"ma\",msg.payload.ma)\nglobal.set(\"ms\",ms
g.payload.ms)\nvar
apikey=\"Q0dqLIDyWxUgR4pFo3lxLP0mtNfmJ-ElCCVoMrBd80__\";\nmsg.headers={\"
content-type\":\"application/x-www-form-urlencoded\"}\nmsg.payload={\"grant_type\"
:\"urn:ibm:params:oauth:grant-type:apikey\", \"apikey\":apikey}\nreturn
msg;\n","outputs":1,"noerr":0,"x":320,"y":900,"wires":[["ed5d39e0.2ea778"]]}, {"id":"ed5d39
e0.2ea778","type":"http
```

```

request","z":"80fc8dba.aa05a","name":"","method":"POST","ret":"obj","paytoqs":false,"url":"
https://iam.cloud.ibm.com/identity/token","tls":"","persist":false,"proxy":"","authType":"","x
":490,"y":1040,"wires":[["e80bd4bd.9b0628"]]},{"id":"e80bd4bd.9b0628","type":"function",
z":"80fc8dba.aa05a","name":"Pre Prediction","func":"var mr=global.get(\"mr\")\nvar
mt=global.get(\"mt\")\nvar mp=global.get(\"mp\")\nvar ma=global.get(\"ma\")\nvar
ms=global.get(\"ms\")\nvar token=msg.payload.access_token\nvar
instance_id=\"2d51206d-d636-4a6d-8348-5c806a2cd38c\"\nmsg.headers={'Content-
Type': 'application/json','Authorization':\"Bearer
\"+token,\"ML-Instance-ID\":instance_id}\nmsg.payload={'input_data\": [{\"fields\":
[\"mean_radius\", \"mean_texture\", \"mean_perimeter\", \"mean_area\",
\"mean_smoothness\"], \"values\": [[mr,mt,mp,ma,ms]]}]\nreturn
msg;\",\"outputs\":1,\"noerr\":0,\"x\":600,\"y\":880,\"wires":[[\"55791bce.75da34\"]]},{"id":"55791bce
.75da34","type":"http
request","z":"80fc8dba.aa05a","name":"","method":"POST","ret":"obj","paytoqs":false,"url":"
https://eu-gb.ml.cloud.ibm.com/v4/deployments/15844736-fa9b-46a6-8c54-5815c9a
3bd4e/predictions","tls":"","persist":false,"proxy":"","authType":"","x":730,"y":1020,"wires":[[
b66853a5.2756a","cecf2c30.c5022"]]},{"id":"317fa518.e8e9da","type":"ui_text","z":"80fc8
dba.aa05a","group":"acfa63c0.1b9b4","order":2,"width":0,"height":0,"name":"","label":"Dign
osis","format":"{msg.payload}","layout":"row-spread","x":1000,"y":1000,"wires":[],{"id":"b
66853a5.2756a","type":"function","z":"80fc8dba.aa05a","name":"","func":"msg.payload=m
sg.payload.predictions[0].values[0][1][1]\nreturn

```

```
msg;","outputs":1,"noerr":0,"x":790,"y":880,"wires":[["317fa518.e8e9da","7e1c0c6b.6ffd84"]]},{"id":"7e1c0c6b.6ffd84","type":"debug","z":"80fc8dba.aa05a","name":"","active":true,"to sidebar":true,"console":false,"tostatus":false,"complete":"payload","targetType":"msg","x":930,"y":760,"wires":[]},{"id":"cecf2c30.c5022","type":"debug","z":"80fc8dba.aa05a","name":"","active":true,"tosidebar":true,"console":false,"tostatus":false,"complete":"payload","targetType":"msg","x":990,"y":880,"wires":[]}]
```

"THANK YOU"

