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 Purose:-

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 organizations to remove the breask 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, AutoAl Machine Learning Service. The model is deployed on IBM cloud to get scoring end point which will

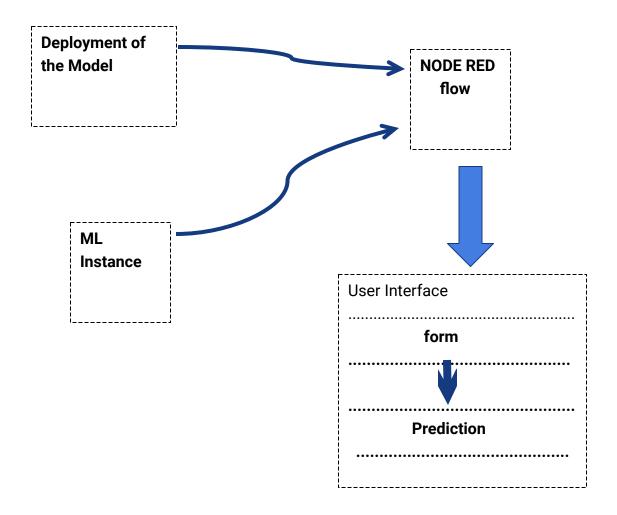
be used as API in mobile apps or web app building. We will develop a web application using node red service. We will use the scoring end point to give user input values to the deployed model.

The model prediction will be showcased on User Interface.

3.THEORETICAL ANALYSIS-

Dataset Auto Al Experiment Creating Model Pipelines Saving a Model Pipeline For the Model

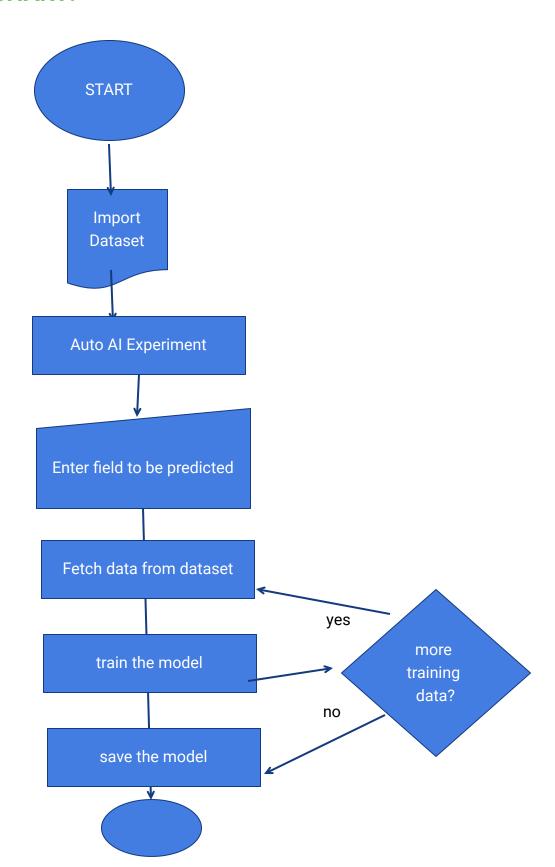
> 23. Sofware Designing:-

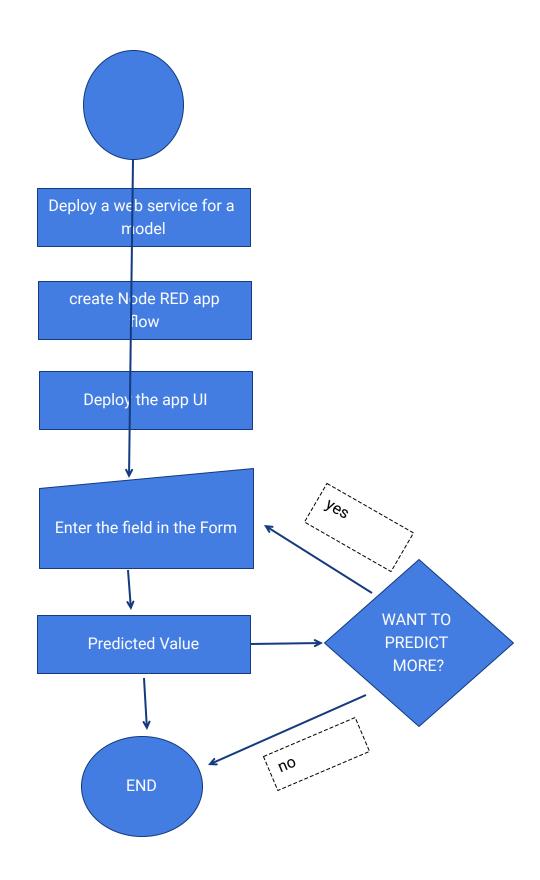


4. EXPERIMENTAL INVESTIGATIONS:-

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 . Requrements 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 shown in Women. The Node RED app gives an User-Friendly interface to input the input the 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 bood 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 heurestic analysis and can be further extended to predict more detailed requirements in future. these model will be more helpfull to predict and analysing the breast cancer patients according to growing up of the populations in the world.

11. <u>Bibliography/ References:</u>

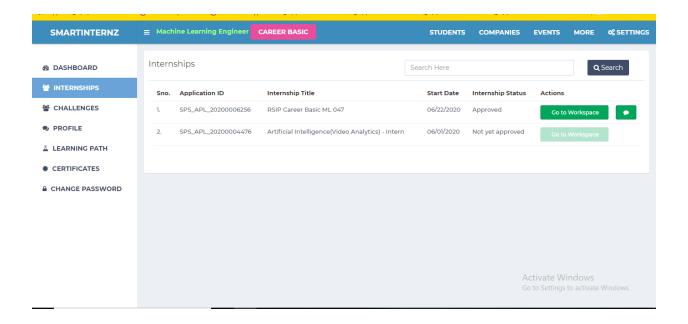
> Source of Dataset:

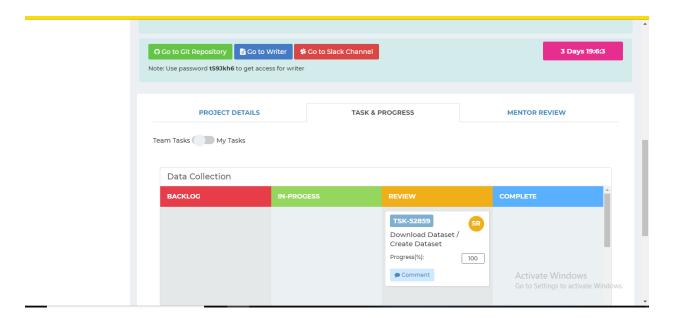
√ https://www.kaggle.com/merishnasuwal/breast-cancer-prediction-dataset

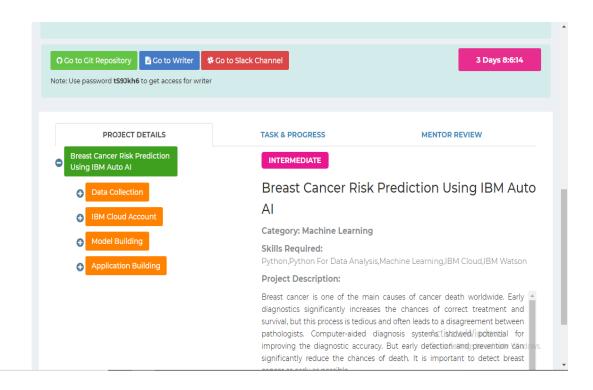
12.APPENDIX:-

Screenshots

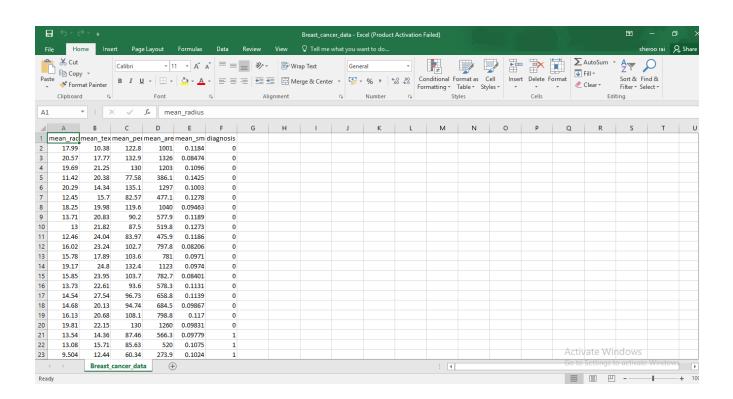
A.1-Internship Project-



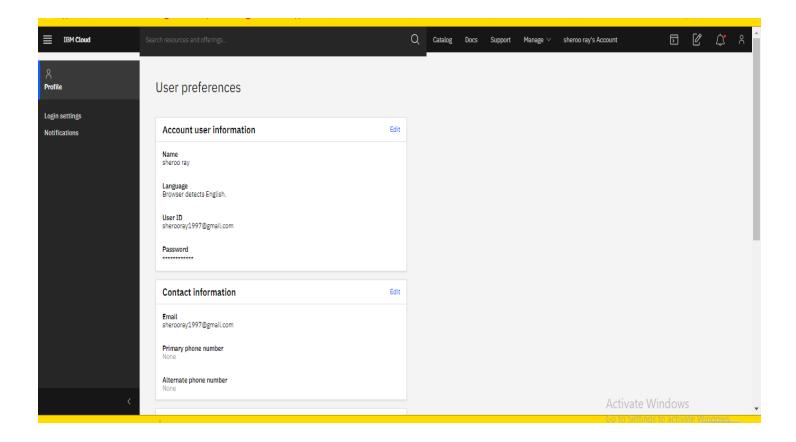


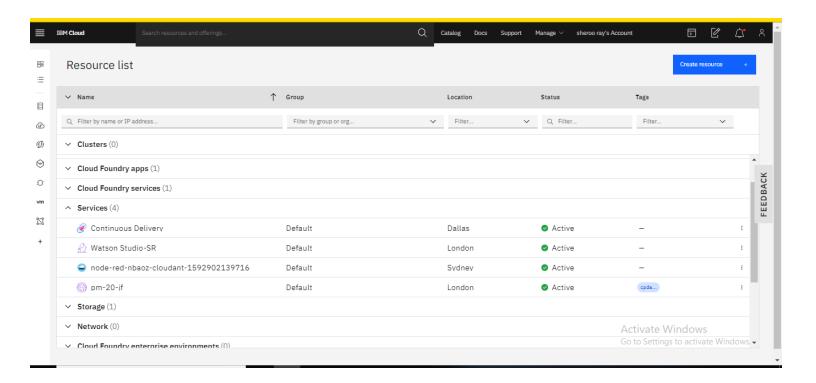


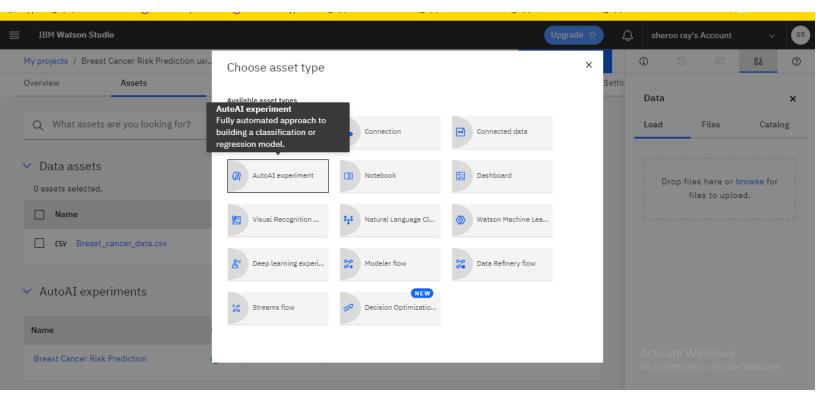
➤ A.2 Data Collection:-

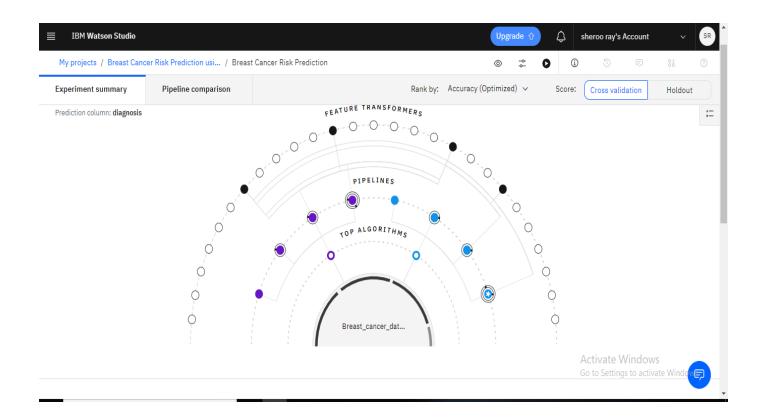


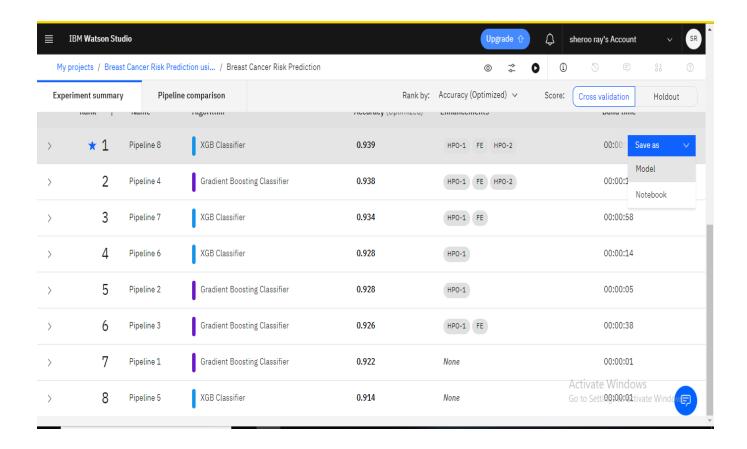
➤ IBM Cloud Service & Model Building:-

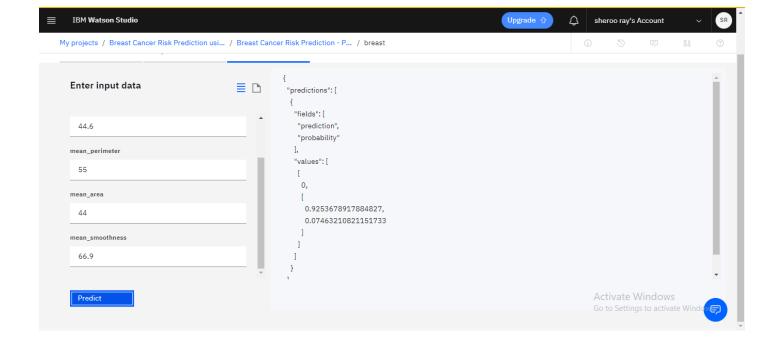


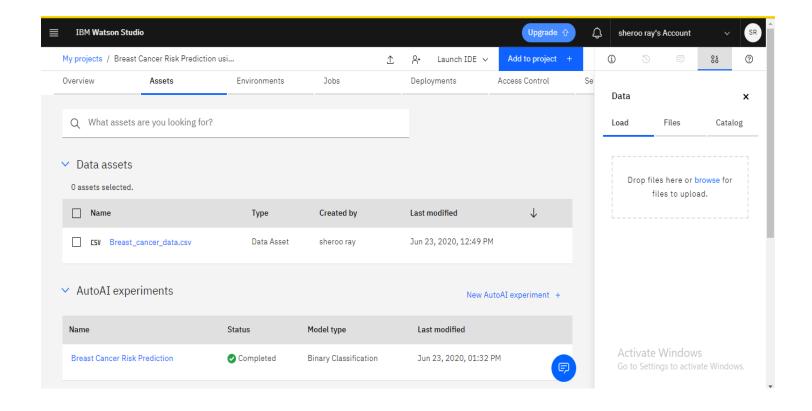




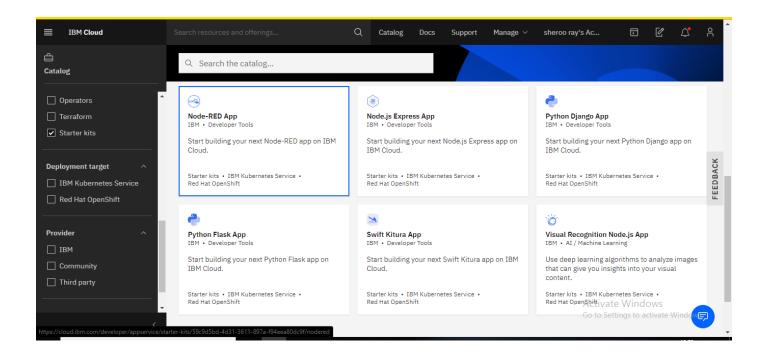


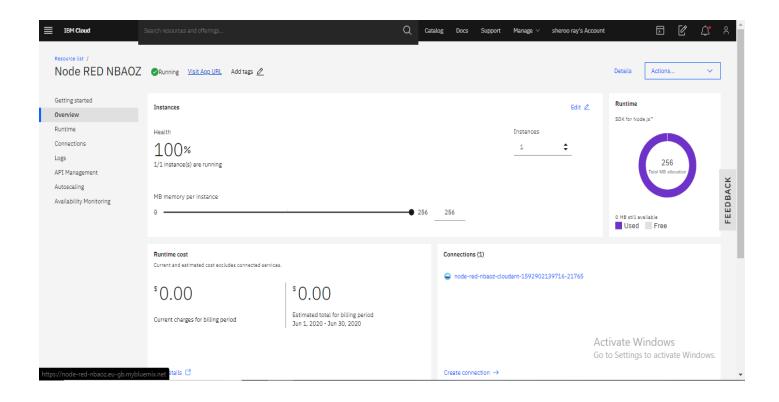






➤ <u>Application Building and Web UI:-</u>





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.

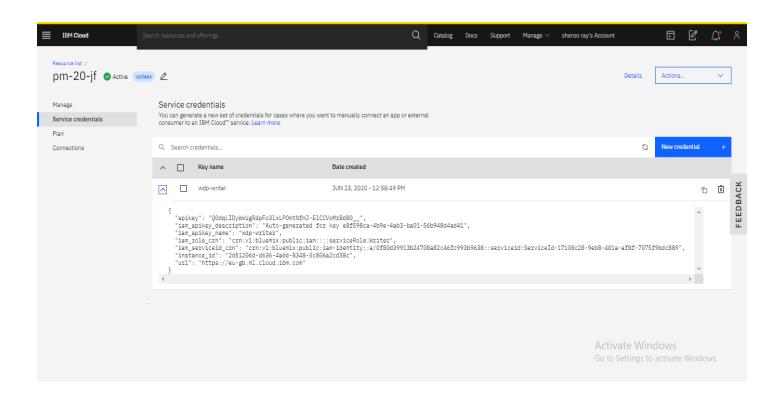
More information about Node-RED, including documentation, can be found at <u>nodered.org</u>.

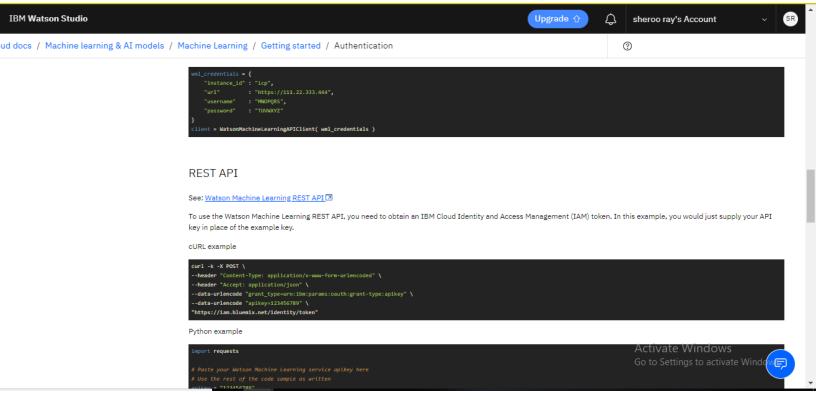
Go to your Node-RED flow editor

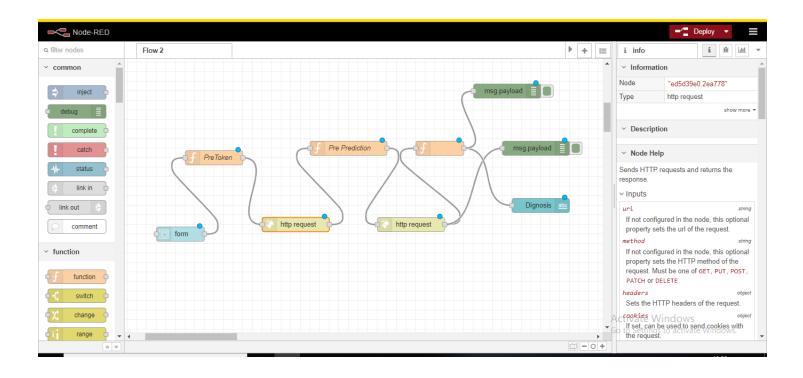
Learn how to customise Node-RED

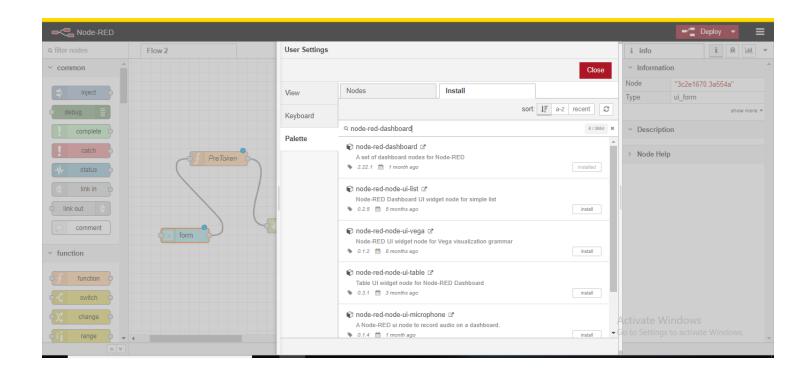
Activate Windows
Go to Settings to activate Windows.

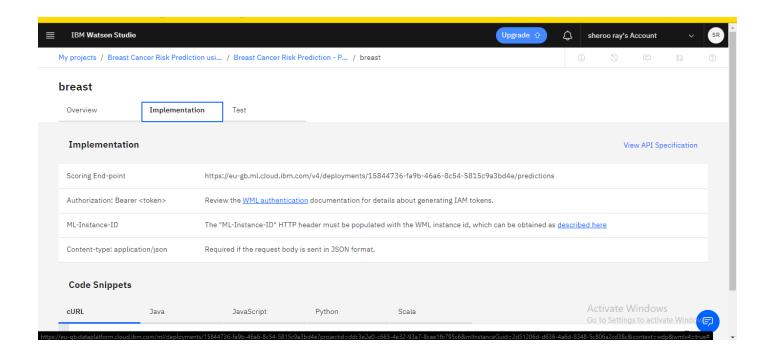
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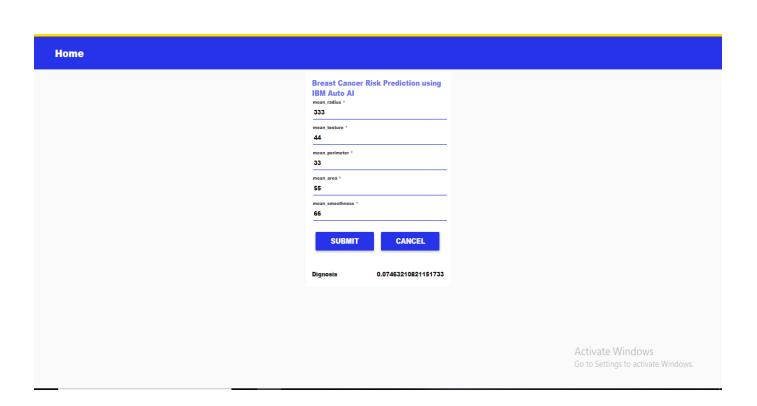












A.2 Flow.Json file Source Code:-

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"THANK YOU"