



Low Level Document (LLD) Breast Cancer Prediction

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DECLARATION

I declare that this written submission represents us ideas is my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources.

I also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission.

I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Revision History

Version	Date	Author	Reviewer	Approver	Comments
0.1	16-06-2022	Sarthak Wakchaure	Sarthak Wakchaure		Draft version
0.2	20-06-2022	Sarthak Wakchaure	Sarthak Wakchaure		did some selections like key notes, screen validations and attributes to be added
0.3	25-06-2022	Sarthak Wakchaure	Sarthak Wakchaure		did document format related comments like correction of version, adding one sections for open issues etc
0.4	1-07-2022	Sarthak Wakchaure	Sarthak Wakchaure		did some changes like correct sequence diagram, changes in data design sections etc
1.0	5-07-2022	Sarthak Wakchaure	Sarthak Wakchaure		Baseline version



Table of Contents

1. Introduction	6
1.1 Scope of the document.....	6
1.2 Intended Audience.....	6
1.3 System Overview.....	7
2. Project Briefing.....	
3. Problem Statement.....	
4. Problem Solution.....	
5. Objective of Project.....	
6. Scope of Project.....	
7. Block Diagram.....	
8. Requirements Gathering.....	
9. Analysis.....	
10. Final Screenshot of Project Output.....	



1. Introduction:

1.1 Scope of the Document

- This section will cover details regarding scope of the document
- Low level design document will be at component level i.e., for website portal there will be one LLD

1.2 Intended Audience

- This section will cover categories of audiences who will be referring/reviewing this document

1.3 System Overview

- This section will capture overview of system application i.e for what system is being developed
- Who are the stake holders of system?
- What are other external Systems through which this will be interacting

2. Project Briefing:

Each year number of deaths is increasing extremely because of breast cancer. It is the most frequent type of all cancers and the major cause of death in women worldwide. Any development for prediction and diagnosis of cancer disease is capital important for a healthy life. Consequently, high accuracy in cancer prediction is important to update the treatment aspect and the survivability standard of patients. Everyone's life depends on their health. Breast cancer can develop in either a man or female when the breast's cells start to proliferate uncontrollably. These cells typically develop into tumours, which can be felt as a bump or seen on an x-ray. It is possible to distinguish between benign and malignant forms of cancer.

3. Problem Statement:

To develop a machine learning-based method for predicting a patient's cancer type—malignant or benign.

4. Problem Solution:

Developed the web application to predict whether patient has either malignant or benign cancer based on given inputs.

5. Objective of the Project:

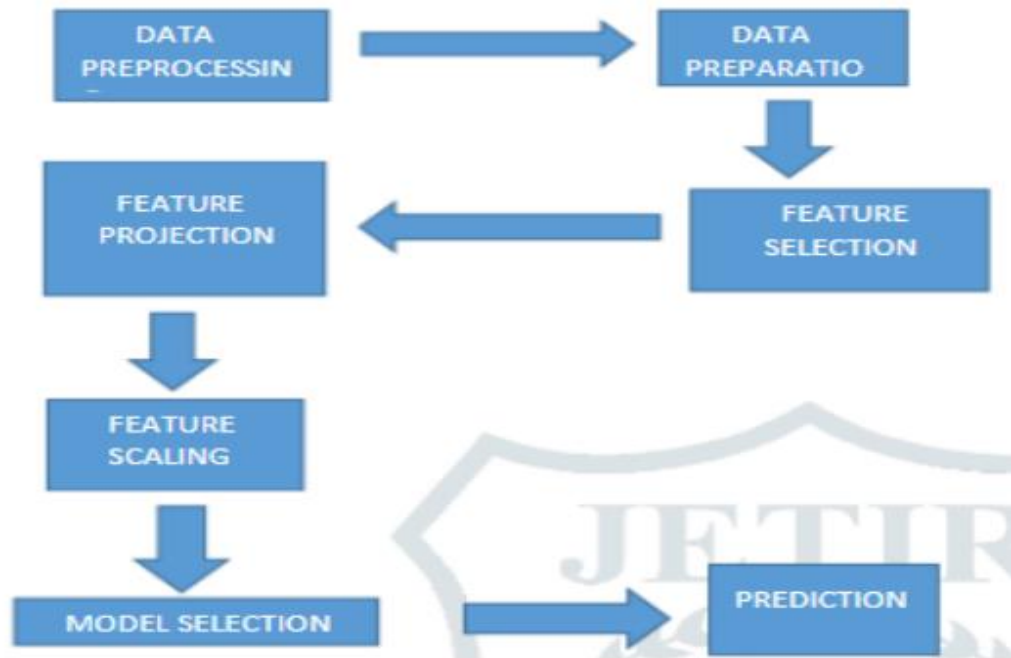
The goal of the project is to classify the cancer is malignant or benign. Also, which features help predict breast cancer.

6. Scope of Project:

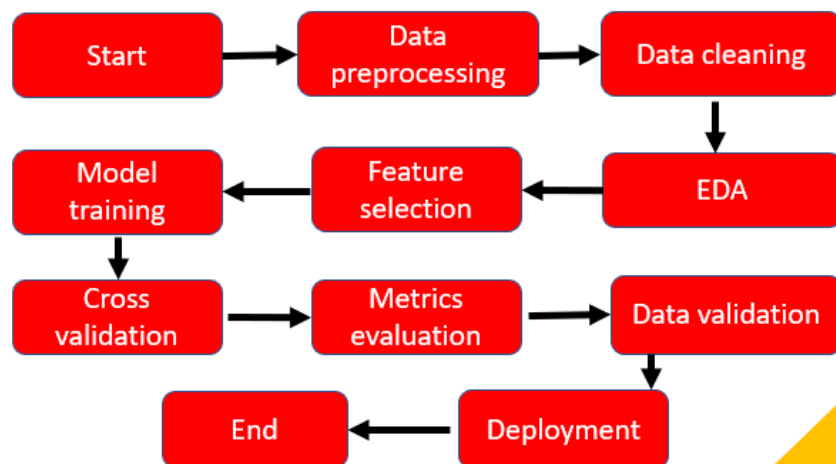
The breast cancer prediction webapp uses a regression model based on machine learning to help identify if a patient has malignant or benign cancer. Knowing what form of breast cancer the patient has can help the doctor to treat the patient appropriately.

7. Block Diagram:

Diagram/Flowchart:



Architecture



8. Requirements Gathering:

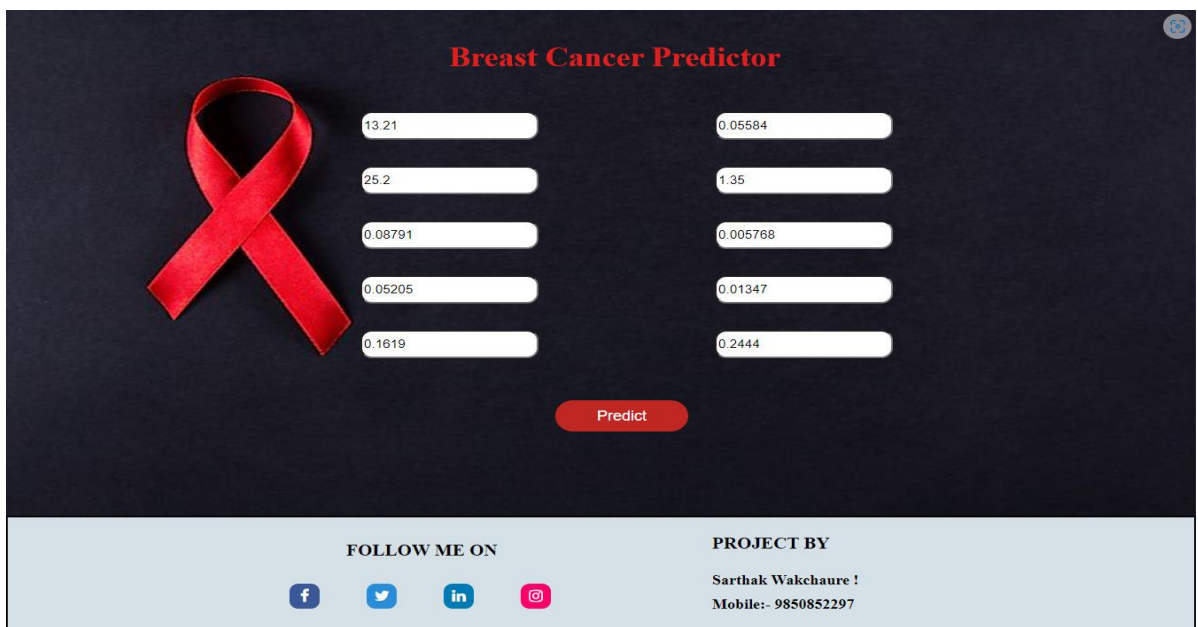
- Window 10 Operating system
- Visual studio software
- Any compatible browser
- Project integration idea from IEEE website
- Few Github Non copyrighted source codes

9. Analysis:

In order to study breast cancer, I used the UCI repository's dataset. In order to assist detect whether a patient has malignant or benign cancer, I employed the logistic regression method from machine learning. Using the information provided on the website, it will forecast the type of cancer. To determine the patient's cancer kind, 10 inputs are needed. For this research, I utilised a logistic regression classifier, which provided accuracy of 92%. This website can assist a doctor in determining if a patient has malignant or benign cancer so that the patient can receive the appropriate therapy.

10. Final Screenshot of Project Output

Input



The screenshot displays the 'Breast Cancer Predictor' web application. The interface features a dark blue background with a red ribbon logo on the left. The title 'Breast Cancer Predictor' is centered at the top in red. Below the title, there are ten input fields arranged in two columns of five. The values entered in these fields are: 13.21, 25.2, 0.08791, 0.05205, 0.1619 in the left column, and 0.05584, 1.35, 0.005768, 0.01347, 0.2444 in the right column. A red 'Predict' button is located below the input fields. At the bottom, there is a light blue footer section containing social media links under 'FOLLOW ME ON' and project details under 'PROJECT BY'.

Input 1	Input 2
13.21	0.05584
25.2	1.35
0.08791	0.005768
0.05205	0.01347
0.1619	0.2444

Predict


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PROJECT BY

Sarthak Wakchaure !
Mobile:- 9850852297

Output







Breast Cancer Predictor

<input type="text" value="Radius mean"/>	<input type="text" value="Fractal Dimension mean"/>
<input type="text" value="Texture mean"/>	<input type="text" value="Texture SE"/>
<input type="text" value="Smoothness mean"/>	<input type="text" value="Smoothness SE"/>
<input type="text" value="Compactness mean"/>	<input type="text" value="Symmetry SE"/>
<input type="text" value="Symmetry mean"/>	<input type="text" value="Symmetry Worst"/>

Predict

Patient has **Benign** type of Cancer

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