

☐ **Objective:**

1. Classify breast tumour dataset into 2 classes i.e, benign or malignant using machine learning models like- Logistic Regression, SVM , Neural Network.
2. Evaluate the model accuracy.

☐ **Dataset Link:**

- ☐ **About Dataset:** The given dataset is made up with fine needle aspiration biopsy reports where a thin needle is inserted into abnormal tissue or fluid, aiding in diagnosis or excluding conditions like cancer. The dataset contains a total 569 number of biopsy out of which 357 are benign, 212 are malignant. Column 'diagnosis' contains the report. [M—Malignant, B——Benign]. The features this dataset contains are as follows-

Parameters:

Ten real-valued features are computed for each cell nucleus:

- a) radius (mean of distances from center to points on the perimeter)
- b) texture (Standard deviation of gray-scale values)
- c) perimeter
- d) area
- e) smoothness (local variation in radius lengths)
- f) compactness ($\text{perimeter}^2 / \text{area} - 1.0$)
- g) concavity (severity of concave portions of the contour)
- h) concave points (number of concave portions of the contour)
- i) symmetry
- j) fractal dimension

The mean, standard error and "worst" or largest (mean of the three largest values) of these features were computed for each image, resulting in 30 features.

Create a folder with the name <YourRoll>_A1. Copy your code and all your supporting files including one README file on how to execute the code.