# Project Description Document

1-SVM Implementation on numerical dataset

A)General Information on the dataset:

1-Dataset name: BreastCancerDataset.csv

2-Number of classes: 2

3-Labels of the two classes: M for Malignant B for Benign

4-Total Number of samples in dataset: 569

5- Number of samples used in training: 80% of the dataset 🡪 455

6-Number of samples used in testing: 20% of the dataset 🡪114

B) Implementation Details

1-Number of Features extracted: 30, Names of features extracted: 1-radius mean , 2-texture mean , 3-perimeter mean , 4- area mean, 5- smoothness mean , 6-compactness mean , 7-concavity mean , 8-concave points\_mean , 9-symmetry\_mean , 10-fractal\_dimension\_mean , 11-radius\_se , 12-texture\_se , 13-perimeter\_se , 14-area\_se , 15-smoothness\_se, 16-compactness\_se , 17-concavity\_se , 18-concave points\_se , 19-symmetry\_se , 20-fractal\_dimension\_se , 21-radius\_worst , 22-texture\_worst , 23-perimeter\_worst , 24-area\_worst , 25-smoothness\_worst , 26-compactness\_worst , 27-concavity\_worst , 28-concave points\_worst , 29-symmetry\_worst , 30-fractal\_dimension\_worst

2-Cross Validation: No

3-Hyperparameters used: RBF Kernel

C- Result Details

1-Accuracy: 98%

2-Confusion Matrix:Chart

Description automatically generated

3- ROC Curve

Chart

Description automatically generated