

Project 2 - Breast Cancer Classification Using SVM

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Task: To classify tumours into malignant (cancerous) or benign (non-cancerous) using features obtained from several cell images.

Following are the steps I undertook while building the project:

1. Loading Python Libraries and Cancer Dataset from Sklearn datasets.
2. Visualize the features and their relationships using SNS library.
3. There is a strong correlation between mean radius and mean perimeter, as well as mean area and mean perimeter.
4. Then, I created a target and predictor matrix from the dataset.
5. "y" = target variable, "X" = features / predictors that are the remaining columns
6. Then I split the data set into train and test data sets with test size = 0.2.
7. I imported SVM from sklearn, trained the train data set using this model, and made a prediction with the test data set.
8. Then, I created a confusion matrix to evaluate our model's performance on the test dataset.
9. I created a heat map to visualise the confusion matrix.
10. Initial accuracy = 93 %
11. Carried on Normalization to increase accuracy to 96%.