1.Develop Logistic regression on prediction of disease/agriculture/finance.

Data Set Description

(No of features-Continous/Discrete)

1.Data Pre-processing

2.Dimensionality Reduction (PCA, SVD, LDA) (Feature extraction)

3.Logistic regression Model

4.Evaluation Metrics

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Feature Extraction | Model | Accuracy | Sensitivity/Recall | Specificity | Precision | F1-Score | Kappa Score |
| PCA | 0.99 | 0.99 | 1.00 | 0.99 | 0.99 | 0.99 | 0.55 |
| SVD | 0.98 | 0.98 | 1.00 | 1.0 | 0.99 | 0.99 | 0.0 |
| LDA | 0.99 | 0.99 | 1.00 | 0.99 | 1.00 | 1.00 | 0.87 |
| With out Feature Selection | 0.99 | 0.99 | 1.00 | 0.99 | 1.00 | 1.00 | 0.91 |

Comparison of accuracies in terms of graphs

Justification

Write the mathematical calculation of PCA/SVD/LDA in observation