|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Data size | Performance | Error graph | ROC Curve | Bar chart |  |
| KNN\_threefold | 5000 | [['TP' '302.0']  ['FP' '42.0']  ['TN' '586.0']  ['FN' '70.0']  ['sensitivity' '0.8118279569892473']  ['specificity' '0.9331210191082803']  ['accuracy' '0.888']  ['f1' '0.8435754189944134']  ['AUC' '0.8724744880487637']] |  |  |  | thresholds|TP |FP |TN |FN  0.0 |213 |6 |622 |159  0.25 |271 |16 |612 |101  0.5 |302 |42 |586 |70  0.75 |331 |93 |535 |41  1.0 |372 |628 |0 |0 |
| KNN\_kfold | 5000 | Model Performance CV\_10:  [['TP' '1523.0']  ['FP' '214.0']  ['TN' '2823.0']  ['FN' '440.0']  ['sensitivity' '0.7758532857870606']  ['specificity' '0.9295357260454395']  ['accuracy' '0.8692']  ['f1' '0.8232432432432433']  ['AUC' '0.85269450591625']] |  |  |  | thresholds|TP |FP |TN |FN  0.0 |1167 |0 |3037 |796  0.25 |1470 |43 |2994 |493  0.5 |1704 |112 |2925 |259  0.75 |1868 |286 |2751 |95  1.0 |1963 |3037 |0 |0 |
| SVM\_threefold | 5000 | Model Performance CV\_10:  [['TP' '262.0']  ['FP' '26.0']  ['TN' '602.0']  ['FN' '110.0']  ['sensitivity' '0.7043010752688172']  ['specificity' '0.9585987261146497']  ['accuracy' '0.864']  ['f1' '0.7939393939393941']  ['AUC' '0.8314499006917335']] |  |  |  | thresholds|TP |FP |TN |FN  0.0 |0 |0 |628 |372  0.25 |7 |165 |463 |365  0.5 |110 |602 |26 |262  0.75 |282 |624 |4 |90  1.0 |372 |628 |0 |0 |
| SVM\_kfold | 5000 | Model Performance CV\_10:  [['TP' '1373.0']  ['FP' '202.0']  ['TN' '2835.0']  ['FN' '590.0']  ['sensitivity' '0.6994396332144677']  ['specificity' '0.9334869937438262']  ['accuracy' '0.8416']  ['f1' '0.776144714527982']  ['AUC' '0.8164633134791469']] |  |  |  | thresholds|TP |FP |TN |FN  0.0 |0 |0 |3037 |1963  0.25 |12 |1242 |1795 |1951  0.5 |99 |2968 |69 |1864  0.75 |1295 |3025 |12 |668  1.0 |1963 |3037 |0 |0 |
| KNN\_loo | 1000 | Model Performance CV\_10:  [['TP' '287.0']  ['FP' '56.0']  ['TN' '546.0']  ['FN' '111.0']  ['sensitivity' '0.7211055276381909']  ['specificity' '0.9069767441860465']  ['accuracy' '0.833']  ['f1' '0.7746288798920379']  ['AUC' '0.8140411359121188']] |  |  |  | thresholds|TP |FP |TN |FN  0.0 |178 |0 |602 |220  0.25 |256 |7 |595 |142  0.5 |323 |36 |566 |75  0.75 |372 |95 |507 |26  1.0 |398 |602 |0 |0 |
| SVM\_loo | 1000 | Model Performance CV\_10:  [['TP' '230.0']  ['FP' '43.0']  ['TN' '559.0']  ['FN' '168.0']  ['sensitivity' '0.5778894472361809']  ['specificity' '0.9285714285714286']  ['accuracy' '0.789']  ['f1' '0.6855439642324888']  ['AUC' '0.7532304379038047']] |  |  |  | thresholds|TP |FP |TN |FN  0.0 |0 |0 |602 |398  0.25 |0 |83 |519 |398  0.5 |17 |587 |15 |381  0.75 |359 |600 |2 |39  1.0 |398 |602 |0 |0 |

|  |  |  |
| --- | --- | --- |
| KNN\_threefold | thresholds|TP |FP |TN |FN  0.0 |213 |6 |622 |159  0.25 |271 |16 |612 |101  0.5 |302 |42 |586 |70  0.75 |331 |93 |535 |41  1.0 |372 |628 |0 |0 | [['TP' '302.0']  ['FP' '42.0']  ['TN' '586.0']  ['FN' '70.0']  ['sensitivity' '0.8118279569892473']  ['specificity' '0.9331210191082803']  ['accuracy' '0.888']  ['f1' '0.8435754189944134']  ['AUC' '0.8724744880487637']] |
| KNN\_kfold | thresholds|TP |FP |TN |FN  0.0 |1167 |0 |3037 |796  0.25 |1470 |43 |2994 |493  0.5 |1704 |112 |2925 |259  0.75 |1868 |286 |2751 |95  1.0 |1963 |3037 |0 |0 | Model Performance CV\_10:  [['TP' '1523.0']  ['FP' '214.0']  ['TN' '2823.0']  ['FN' '440.0']  ['sensitivity' '0.7758532857870606']  ['specificity' '0.9295357260454395']  ['accuracy' '0.8692']  ['f1' '0.8232432432432433']  ['AUC' '0.85269450591625']] |
| SVM\_threefold | thresholds|TP |FP |TN |FN  0.0 |0 |0 |628 |372  0.25 |7 |165 |463 |365  0.5 |110 |602 |26 |262  0.75 |282 |624 |4 |90  1.0 |372 |628 |0 |0 | Model Performance CV\_10:  [['TP' '262.0']  ['FP' '26.0']  ['TN' '602.0']  ['FN' '110.0']  ['sensitivity' '0.7043010752688172']  ['specificity' '0.9585987261146497']  ['accuracy' '0.864']  ['f1' '0.7939393939393941']  ['AUC' '0.8314499006917335']] |
| SVM\_kfold | thresholds|TP |FP |TN |FN  0.0 |0 |0 |3037 |1963  0.25 |12 |1242 |1795 |1951  0.5 |99 |2968 |69 |1864  0.75 |1295 |3025 |12 |668  1.0 |1963 |3037 |0 |0 | Model Performance CV\_10:  [['TP' '1373.0']  ['FP' '202.0']  ['TN' '2835.0']  ['FN' '590.0']  ['sensitivity' '0.6994396332144677']  ['specificity' '0.9334869937438262']  ['accuracy' '0.8416']  ['f1' '0.776144714527982']  ['AUC' '0.8164633134791469']] |
| KNN\_loo | thresholds|TP |FP |TN |FN  0.0 |178 |0 |602 |220  0.25 |256 |7 |595 |142  0.5 |323 |36 |566 |75  0.75 |372 |95 |507 |26  1.0 |398 |602 |0 |0 | Model Performance CV\_10:  [['TP' '287.0']  ['FP' '56.0']  ['TN' '546.0']  ['FN' '111.0']  ['sensitivity' '0.7211055276381909']  ['specificity' '0.9069767441860465']  ['accuracy' '0.833']  ['f1' '0.7746288798920379']  ['AUC' '0.8140411359121188']] |
| SVM\_loo | thresholds|TP |FP |TN |FN  0.0 |0 |0 |602 |398  0.25 |0 |83 |519 |398  0.5 |17 |587 |15 |381  0.75 |359 |600 |2 |39  1.0 |398 |602 |0 |0 | Model Performance CV\_10:  [['TP' '230.0']  ['FP' '43.0']  ['TN' '559.0']  ['FN' '168.0']  ['sensitivity' '0.5778894472361809']  ['specificity' '0.9285714285714286']  ['accuracy' '0.789']  ['f1' '0.6855439642324888']  ['AUC' '0.7532304379038047']] |