Report on Data1.csv

* Logistic regression linear model with l1 had the highest test accuracy at c=1 with 68% matching
* Logistic regression linear model with l1had the highest training accuracy at c = 0.01 at 72.8% accuracy
* With l2, the highest accuracy on the training is at c = 1 and 74.83% accuracy
* With l2, the highest accuracy on the test data is at c = 100 and 75.6% accuracy
* With polynomial feature transformation and l1 linear model, the highest accuracy rate for the training data was 69.5% at c = 100 and the highest accuracy rate for the test data is 64.5% accuracy for all c in {0.0001, 0.001, 0.01, 1, 10, 100}
* With polynomial feature transformation and l2 linear model, the highest accuracy rate for the training data was 83.833% at c = 10 and the highest accuracy rate for the test data is 74.5% accuracy for all c = 0.0001
* With the linear kernel trick, the highest accuracy rate for the training set is 74.3% at c = 10 and the highest accuracy rate for the test data is 75.6% at c = 1
* The RBF kernel had the highest accuracy rate for the training data where c = 1 and g = 1 with 100% accuracy rate and the highest accuracy rate for the test data is at 71% with c = 1 and g = 0.001.
* With the polynomial kernel, the highest accuracy for the training data is 100% shown at c = 0.1, 0.01, 0.001 and the highest accuracy for the test data is 75% at c = 0.0001, 0.001, 0.01, 0.1.

Report on Cryotherapy

* Logistic regression linear model with l1 had the highest training accuracy for all values of c in {0.0001, 0.001, 0.01, 1, 10, 100} with 51%
* Logistic regression linear model with l1 had the highest test accuracy for all values of c in {0.0001, 0.001, 0.01, 1, 10, 100} at 42.2% accuracy
* With l2, the highest accuracy on the training is at c = 100 and 95% accuracy
* With l2, the highest accuracy on the test data is at c = 100 and 88.89% accuracy
* With polynomial feature transformation and l1 linear model, the highest accuracy rate for the training data was 51.1 % for all c in {0.0001, 0.001, 0.01, 1, 10, 100} and the highest accuracy rate for the test data is 42.2% accuracy for all c in {0.0001, 0.001, 0.01, 1, 10, 100}
* With polynomial feature transformation and l2 linear model, the highest accuracy rate for the training data was 100% at c = 0.01, 0.1, 1, 10, 100and the highest accuracy rate for the test data is 77.7% accuracy for c = 0.01
* With the linear kernel trick, the highest accuracy rate for the training set is 93.3% at c = 10, 1, 0.1 and the highest accuracy rate for the test data is 88.89% at c = 10
* The RBF kernel had the highest accuracy rate for the training data where c = 1 and g = 1 with 100% accuracy rate and the highest accuracy rate for the test data is at 71% with c = 1 and g = 0.001.
* With the polynomial kernel, the highest accuracy for the training data is 100% shown at c = 0.1, 0.01, 0.001 and the highest accuracy for the test data is 75% at c = 0.0001, 0.001, 0.01, 0.1

Report on Immunotherapy

* Logistic regression linear model with l1 had the highest training accuracy for all values of c in {0.0001, 0.001, 0.01, 1, 10, 100} with 77.78%
* Logistic regression linear model with l1 had the highest test accuracy for all values of c in {0.0001, 0.001, 0.01, 1, 10, 100} at 80% accuracy
* With l2, the highest accuracy on the training is at c = 100, 10 and 82.22% accuracy
* With l2, the highest accuracy on the test data is at c = 0.0001, 0.001 and 80% accuracy
* With polynomial feature transformation and l1 linear model, the highest accuracy rate for the training data was 80% for all c in {0.0001, 0.001, 0.01, 1, 10, 100} and the highest accuracy rate for the test data is 77.8% accuracy for all c in {0.0001, 0.001, 0.01, 1, 10, 100}
* With polynomial feature transformation and l2 linear model, the highest accuracy rate for the training data was 100% at c = 0.1, 1, 10, 100 and the highest accuracy rate for the test data is 49.89% accuracy for c = 0.0001, 0.001
* With the linear kernel trick, the highest accuracy rate for the training set is 82.2% at c = 0.0001, and 0.001 and the highest accuracy rate for the test data is 80% at c = 0.001, 0.01
* The RBF kernel had the highest accuracy rate for the training data for all values of c and g with 77.7% accuracy rate and the highest accuracy rate for the test data is at 80% with all values of c and g
* With the polynomial kernel, the highest accuracy for the training data is 100% shown at c = 0.1, 0.01, 0.001 and the highest accuracy for the test data is 53.3% at c = 0.00001, 0.0001, 0.001, 0.01, 0.1.