

Implement everything from scratch and use the evaluation metrics based on the type of tasks. Use 5-fold cross validation on the drug\_200.csv dataset given in the previous assignment.

1. Implement a logistic regression classifier on this dataset without any regularization. Use Lasso, Ridge, and Elastic Net regularization techniques and show their performance.
2. Implement K-Nearest Neighbor classification taking  $K=1, 3, 5$ . Compare their performance.