

Lab Tasks:

1. Use HeartDisease dataset and apply LinearRegression and then pass the result to sigmoid function (write from scratch) and then compare the accuracy of both models.
2. Calculate binary cross entropy loss on the above experiment. Write from scratch.
3. Download a new dataset from UCI Repository <https://archive.ics.uci.edu/ml/datasets.php> and evaluate its accuracy on 5 cross fold.
4. Consider a logistic regression model with $w_1=0.5$ and $w_2=0.31$ and $b=0.09$. $X_1 = 5$, $X_2 = 3$ and actual y is 1. Calculate this numerical by hand and verify your answers by coding the functions below.

Write below functions from scratch:

- ForwardPropagation()
- LossCalculation()
- BackwardPropagation() # This function must update the old weights
- MainLoop which must iterate 5 times and call all the above functions.