Assignment2
Q3 Report

Logistic Regression:

L1 loss:

L1-norm loss function is also known as least absolute deviations (LAD), least absolute errors (LAE). It is basically minimizing the sum of the absolute differences **(S)** between the target value ($\mathbf{Y_i}$) and the estimated values ($\mathbf{f(x_i)}$):

$$S = \sum_{i=1}^{n} |y_i - f(x_i)|.$$

L2 loss:

L2-norm loss function is also known as least squares error (LSE). It is basically minimizing the sum of the square of the differences **(S)** between the target value ($\mathbf{Y_i}$) and the estimated values ($\mathbf{f(x_i)}$**:**

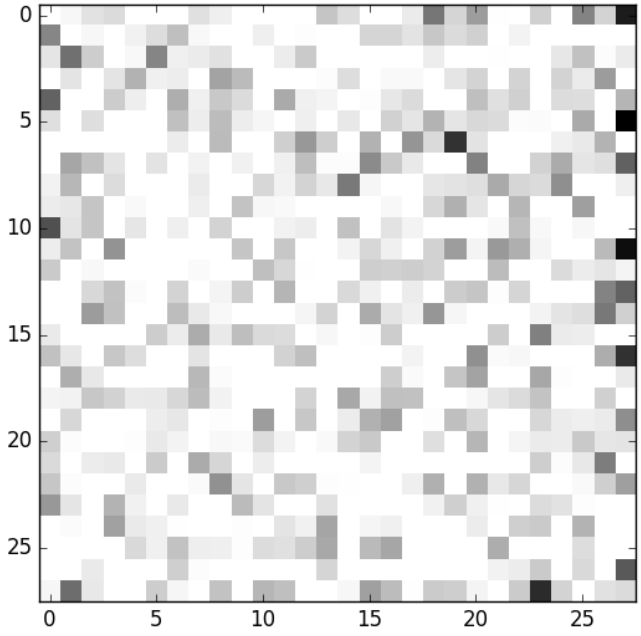
$$S = \sum_{i=1}^{n} (y_i - f(x_i))^2$$

Logistic regression with L1 loss:

Experiment's results:

C(hyperparameter)	Accuracy
0.00322	0.959964412811
5.0	0.939501779359

Activation Map(weights w) for L1 loss:



Logistic regression with L2 loss:

C(hyperparamter)	Accuracy
0.000001	0.960854092527
7.0	0.936832740214

Activation Map for L2 loss: