Deep Learning in Computer Vision
Lab 2

1.Single Neuron

2)Yhat = σ(W*x + b)

3) Cross entropy formula : $-\sum_{c=1}^{M} Y \log(Yhat)$

4) $\frac{dL}{dW} = \frac{1}{m \times ((Yhat - Y) \times X)}$ $\frac{dL}{dB} = \frac{1}{m \times \Sigma(Yhat - Y)}$

5) Single neuron model reaches 0.9834% accuracy

2.One hidden layer

2) Accuracy : 0,9492%. We notice that the accuracy is worse than the single neuron model (probably due to overfitting).

3)Other digits : 1 : 0.9413755828561812
2 :0.9444330874706205
3 :0.945119125772066