Homework #2

To be submitted:

Theoretical analysis:

1. https://github.com/omriallouche/ydata_deep_learning_2021/blob/main/assignments/assignment1/assignment1.ipynb

Build a NN:

1. Build a NN in PyTorch: https://github.com/udacity/deep-learning-v2-pytorch/blob/master/intro-to-pytorch/Part%203%20-%20Training%20Neural%20Networks%20(Exercises).ipynb

2. Build a fully connected network in numpy: https://github.com/omriallouche/ydata_deep_learning_2021/blob/main/assignments/assignment1/two_layer_net.ipynb

Suggested reading

Activation Functions:

1. https://cs231n.github.io/neural-networks-1/#intro
2. https://machinelearningknowledge.ai/activation-functions-neural-network/
   or
   https://www.analyticsvidhya.com/blog/2020/01/fundamentals-deep-learning-activation-functions-when-to-use-them/
3. https://medium.com/@snaily16/what-why-and-which-activation-functions-b2bf748c0441

Optimizers

1. Chapter 8 of the book “Deep Learning” - https://www.deeplearningbook.org/contents/optimization.html

Learning Rate

1. https://www.mygreatlearning.com/blog/understanding-learning-rate-in-machine-learning/
2. https://machinelearningmastery.com/understand-the-dynamics-of-learning-rate-on-deep-learning-neural-networks/

3. https://machinelearningmastery.com/learning-rate-for-deep-learning-neural-networks/