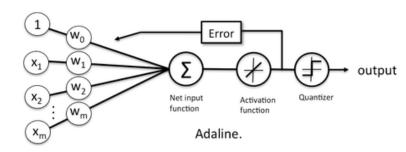# Coursework2

Provided code in the course is the implementation of Perceptron to classify two digits. By using this code:

Adaline.

1. Implement ADALINE algorithm with sigmoid activation function as defined below:

$$g(x) = \frac{1}{1 + e^{-0.0001x}}$$

2. Train the network with normal images of 0 and 1 (12665 training images). Shift the test images, vertically, from 0 to 27 pixels with a 3-pixel step and plot the test accuracy at different shifting values. Please be careful that the pixel values for images are between -1 and 1.

3. At each shifting step, train the network with normal and shifted images (with total 25330 training images). Then plot the test accuracy of the network vs. shifting value.