CES 417T - HW3

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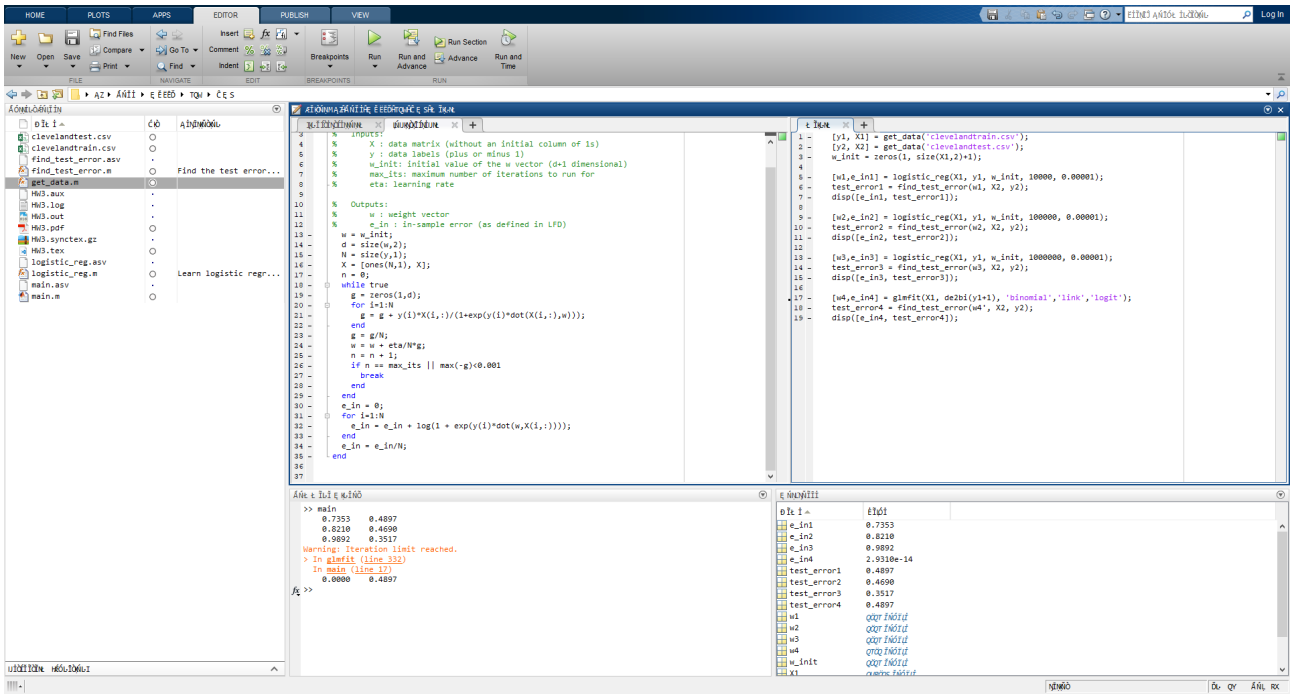
1 Matlab

Here is the result



2 LFD Problem 3.19

(a) Firstly, the transformation should better be an injection in this case. Secondely, N is to large to get this method return in a reasonable time.

(b) I think this method is fine, no obvious problem.

(c) This method is a variant of the second one.

3 LFD Exercise 4.5

(a) $\Gamma = I$.

(b) It should be a matix, and the fist column of Γ should be 1.

4 LFD Problem 4.8

Firstly, we have

$$\nabla E_{aug}(w) = \nabla E_{in}(w) + 2\lambda w$$

So we should updata the weight as

$$w(t+1) = w(t) - \mu \nabla E_{aug}(w(t)) = (1 - 2\mu\lambda)w(t) - \mu \nabla E_{in}(w(t))$$

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