

MSc in Computer Science and Engineering

**Learning and Decision Making 2016-2017**

Homework 4. Supervised learning

**(a)**

=

**(b)**

applying the gradient to with respect to **w**  we have:

**=**

**=**

**=**

**=**  **=** g**,**

thus the gradient of with respect to **w** is equal to g has we wanted to show

**(c)**

computing the Hessian of with respect to **w**:

**=**

**=**

**=**  = H,

thus the Hessian of with respect to **w** is equal to H has we wanted to show