

Assignment 1

CIS 472/572 Machine Learning, Winter 2014

due 11:59 pm, Friday, January 24th

1. a) Define the Task, Performance measure, and Training Experience of two learning systems which are not mentioned in class.

b) Design a learning system for chess game. Write down the main steps for your design. (Note, you can choose several most important board features you think to represent a target function.)

2. See Figure 2.5 in the text, explain in detail why we get those three hypothesis in G_3 from G_2 , and two hypothesis in G_4 from G_3 ? Change the order of training examples from (x_1, x_2, x_3, x_4) to (x_1, x_2, x_4, x_3) , write down all steps from S_0, G_0 to S_4, G_4 . See whether the order matters.

3. Exercise 2.3 in the textbook.

4. Exercise 2.4 in the textbook.

5. Exercise 2.6 in the textbook.

To turn in by paper version: Put your answers into the homework box for CIS 472/572 in the Deschutes hallway (first floor).

To turn in by emails: If you are in **CIS 472**, email your answers to **hang@cs.uoregon.edu**. If you are in **CIS 572**, email to **dou@cs.uoregon.edu**. We prefer that you send in a pdf file. If you are using Word, you should be able to convert your word file to a pdf file.