

CSE 5693 Machine Learning HW1 (Due Jan 30, 2008)

1. Written assignment (from textbook):
 - (a) 1.2 (tic-tac-toe)
 - (b) 1.4
2. Programming assignment: Tic-tac-toe with LMS weight update (Ch1)
 - (a) Use the design from above (1a)
 - (b) Two modes for selecting experience (no apriori knowledge of the weakness of the opponent):
 - i. with teacher
 - ii. without teacher (self-teaching)
 - (c) Weak opponent:
 - i. Do not try to win using the middle spot (try to win in the rows/columns in the perimeter)
 - ii. Do not try to block the other player (no defense)
 - (d) Train on at least 20 games
 - (e) Test on 5 games for performance evaluation
 - (f) Implementation:
 - i. Use your favorite programming language (C, C++, Java).
 - ii. You might have these modules:
 - A. Experience: select experience (teacher and no-teacher modes)
 - B. Learner: input experience, output knowledge
 - C. Player: input knowledge and board, output a move
 - D. Game: input a move, output win/lose/tie/none-of-the-above