

Texas Christian University
CoSc 30103 – 55 Spring 2025
Lab#4
Due: Tuesday April 29, 2025

0) IMPORTANT This lab can be done in groups of two, however every member of the group has to turn in a zip file containing the material to be graded. Also add a small report telling what part did you do

1) Write a program in Python or in Java to implement the Collective Learning scheme discussed in class using as a guide the unsupervised approach for Tic Tac Toe, in this case you will use the 9.pdf (unsupervised collective learning) as guide. Also the ideas of Michie's Menace will be very useful for your work

2) Study the Pseudo code provided in power point 9.pdf

3) You will need to define a selection process using the probability space for the STM

4) Assume the computer always starts, a draw is consider a winner for the first player.

5) The program should also define an algedonic algorithm using a Beta value from 0 to 1 for both reward and punishment

6) Write a report for different values for Beta providing some information about which scheme was better R/P, R/Inaction, change the values of Beta for Reward and Beta for Punishment (e.g. Beta/2)

7) The program should be well documented and yes you make boards that are similar as one board, so the number of possibilities are decreased

8) Put all the files (program source, report, readme, etc.) in a zip to submit you work

9) You will be evaluated using the Lab4Rubric