Texas Christian University

Texas Christian University
CoSc 403503 – 15 Spring 2024
Lab # 4

Due Date: Using D2L, by midnight, Tuesday April 30, 2024

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

2) Study the Pseudo code provided in the powerpoint.pdf

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

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

5) 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)

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

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