

Compulsory Assignment I

Download and install **Python** from <http://www.python.org>

Implement the following program and justify your results:

- 1 Create 5 Tsetlin Automata with actions “No” and “Yes”
- 2 Count the number of Tsetlin Automata that outputs a “Yes”-action
- 3 If the number of “Yes”-actions is M Then:
 - If $M = 0$ OR 1 OR 2 OR 3: Give each Automaton a reward with probability $M * 0.2$, otherwise a penalty
 - If $M = 4$ OR 5: Give each Automaton a reward with probability $0.6 - (M - 3) * 0.2$, otherwise a penalty
- 4 Goto 2

Remark: Generate the rewards independently for each automaton

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Deliverables:

- Brief report on Fronter documenting implementation and results
- Calculate average performance on 100 separate runs
- Calculate average performance with different number of states (e.g., 1,2,3,5,10)
- Five minutes presentation of solution Wednesday September 9