CONNECT N

A Reinforcement Learning Approach

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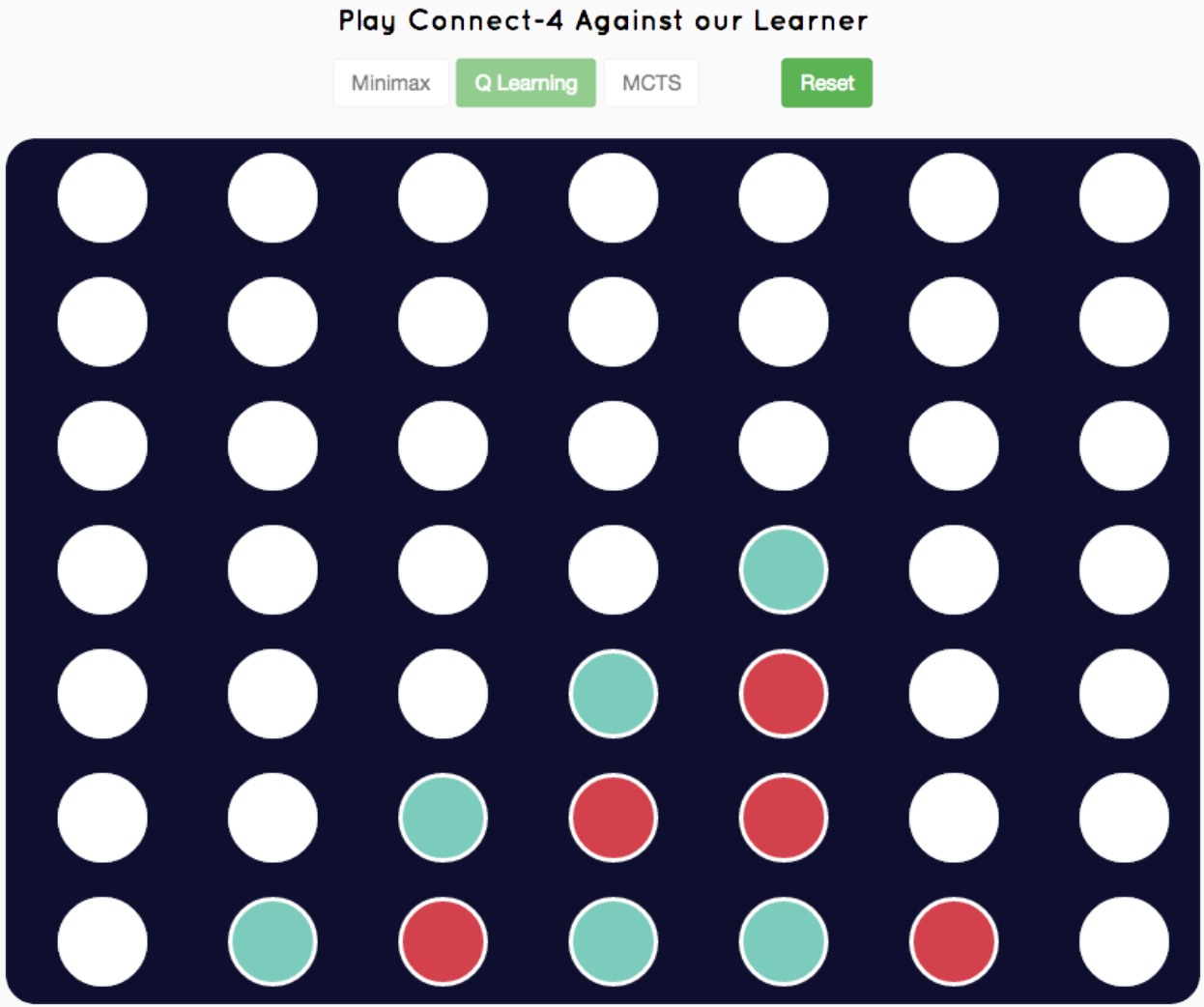
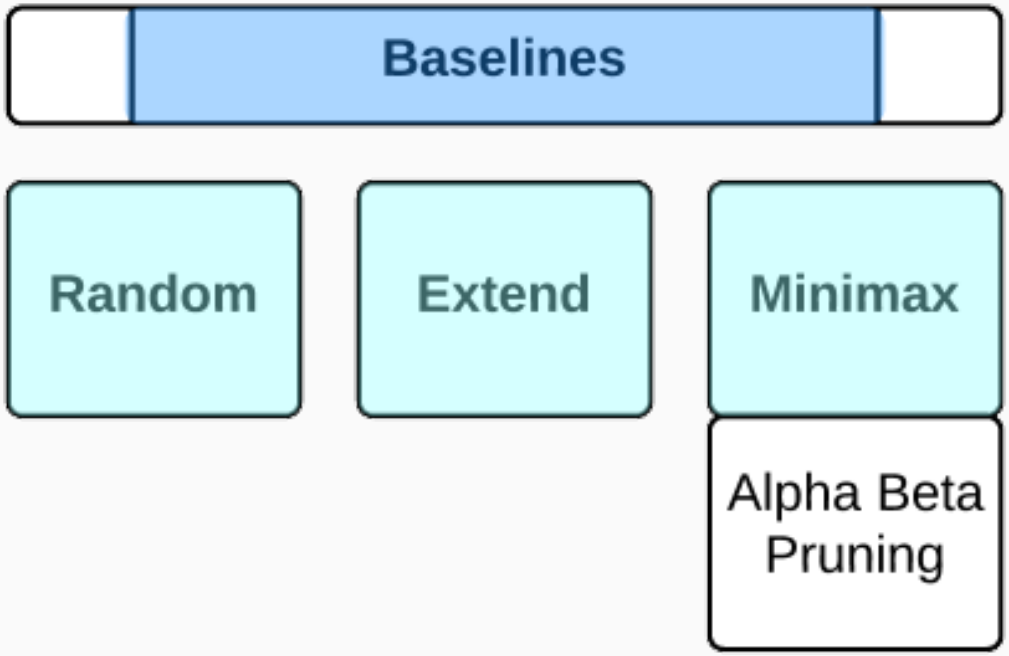
THE GAME ENVIRONMENT

play here: http://connectn.herokuapp.com/

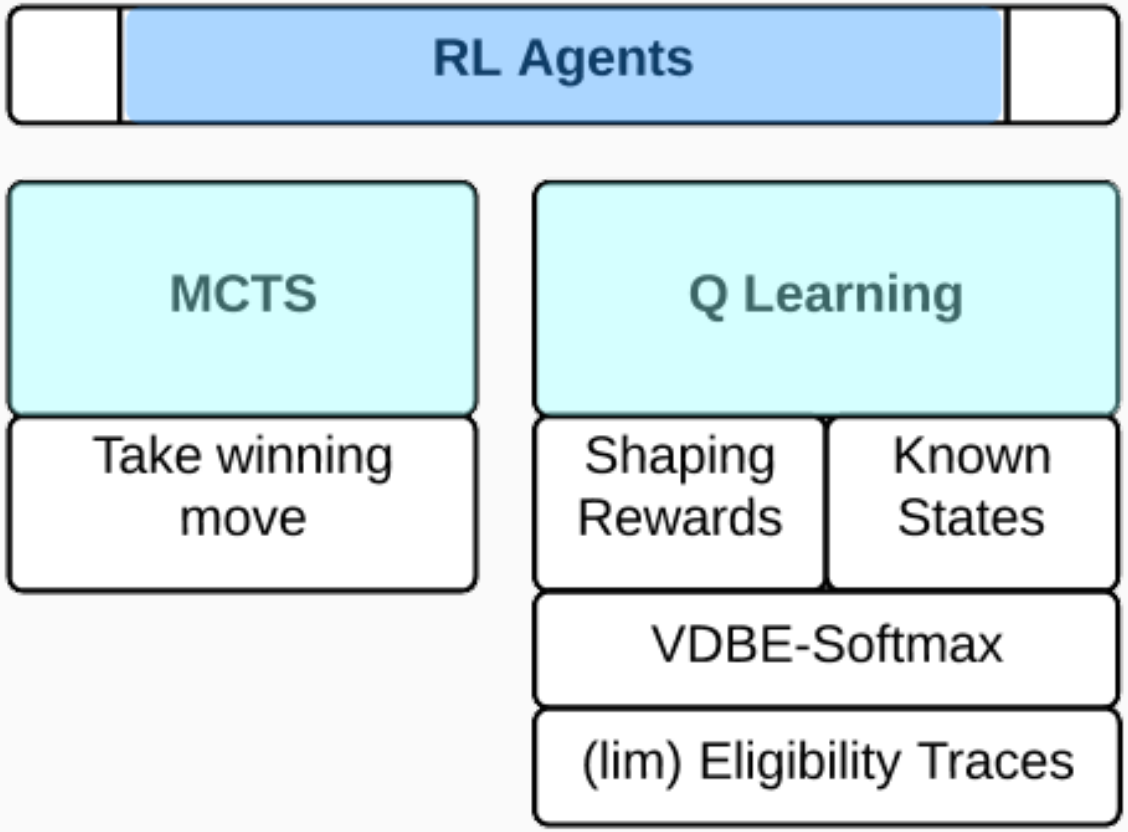
and help train our Q learner!



BASELINE APPROACHES



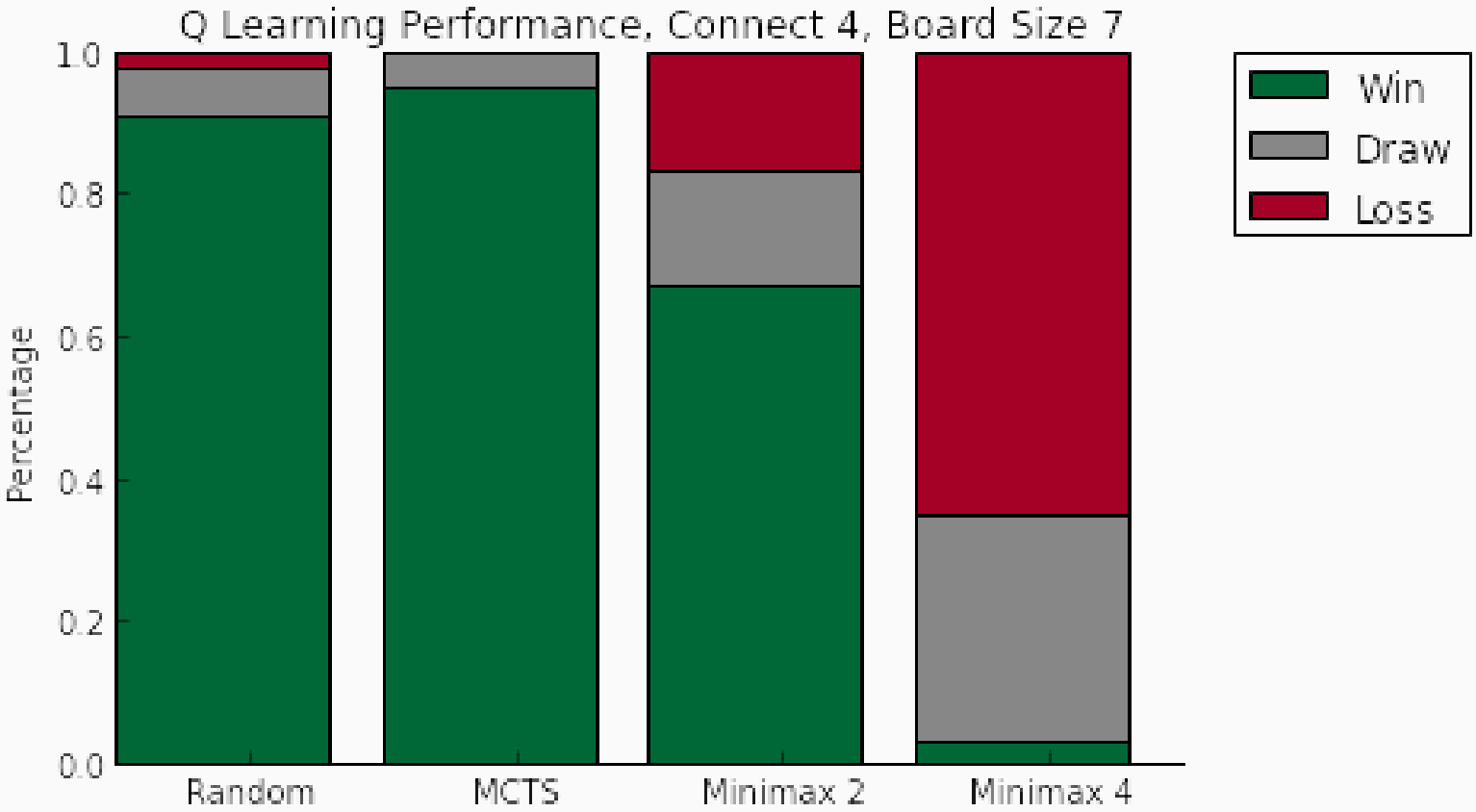
REINFORCEMENT LEARNING APPROACHES



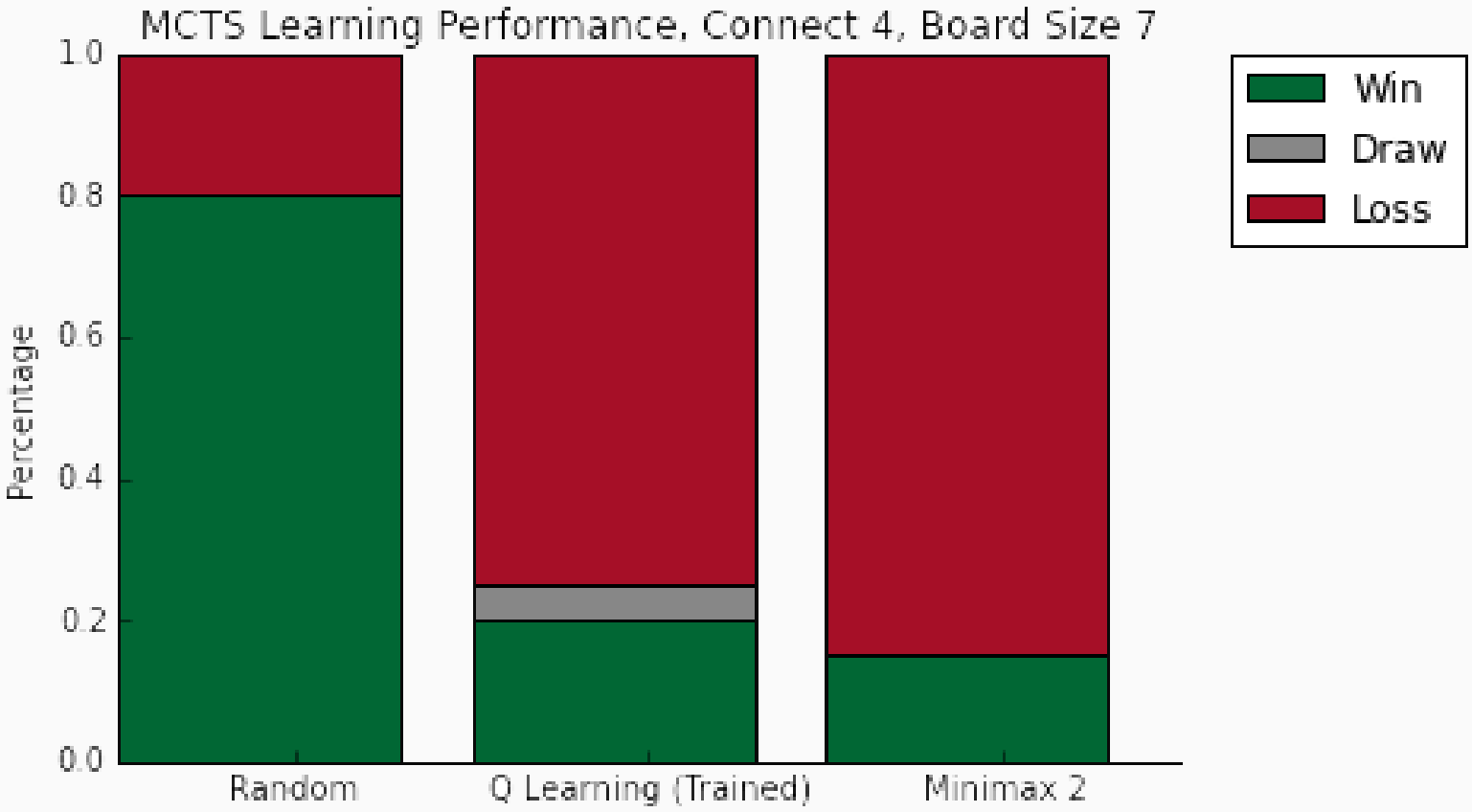
CONCLUSIONS ABOUT CONNECT 4 AS A GAME

1. Player 1 has an advantage
2. Perfect Player 1 can always win if it starts in the middle if number of columns is odd
3. Perfect Player 2 can always win if Player 1 doesn't start in the middle
4. Angela sucks at Connect-4

KNOWN STATES Q LEARNING RESULTS



MCTS RESULTS



EXTENSIONS

1. Localize Q learner
2. MCTS:
    - more iterations
    - heuristics
    - change default policy