

Tic Tac Toe Implementation using Multi Agents

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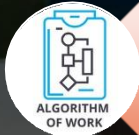
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TIC TAC TOE

Comparison of Min-Max, Alpha-Beta
Algorithm and Reinforcement
Learning Agents in solving the Tic
Tac Toe Game.

Objectives



Design Adversarial Search Algorithm and Reinforcement Agents to solve Tic Tac Toe game.



Design of 3 Artificial Intelligence Agents: Q learning Technique , Min-Max Algorithm, Alpha-Beta Pruning



Plays Tic Tac Toe game multiple times among them to find the efficient Algorithm.



The player who gets the three consecutive symbols in a row or column or diagonally gains a winning point.



Compare the efficiency of three algorithms by calculating the corresponding performance metrics and to find out which performs better either adversarial search or Reinforcement Learning.

Approaches



The first Approach is Q-Learning from Reinforcement Learning.



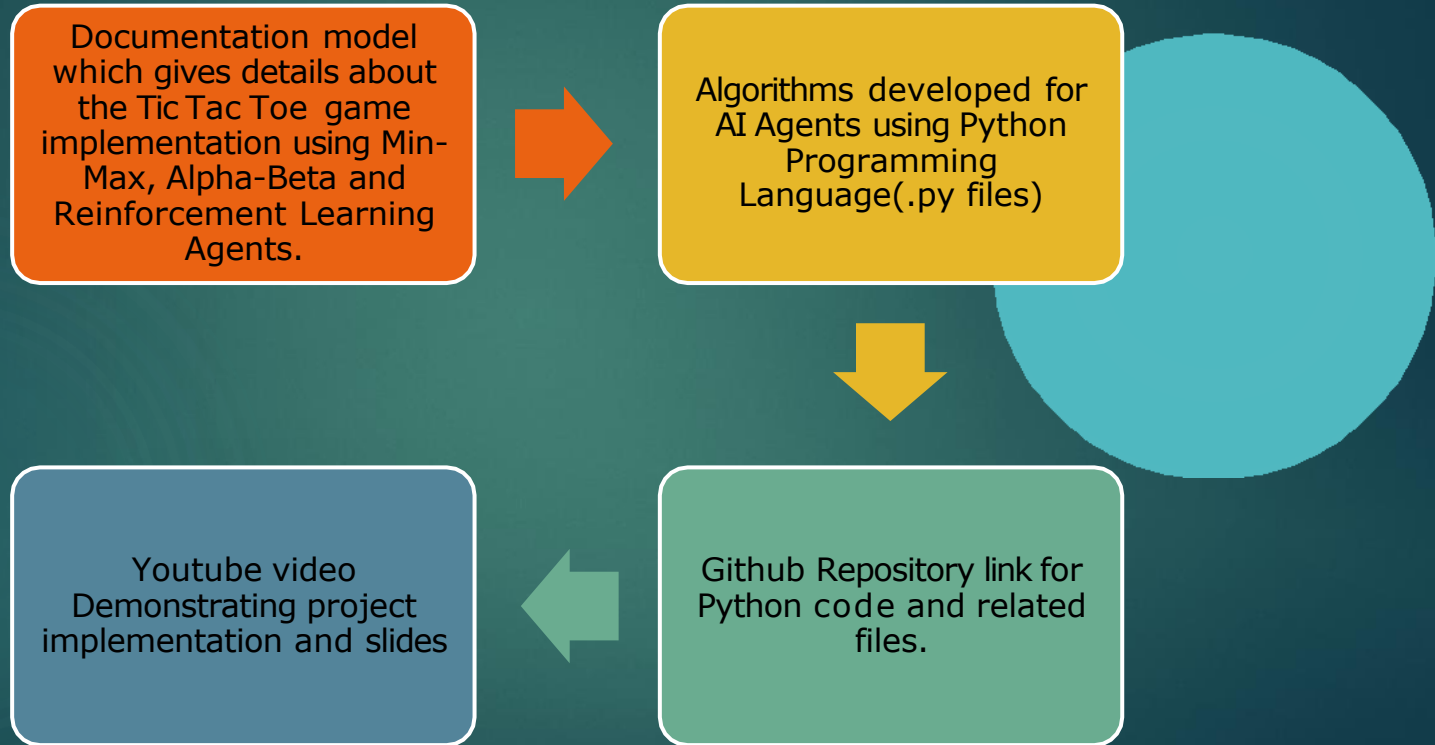
The Second approach is Adversarial Search.

- 1. Min-Max Algorithm**
- 2. Alpha-Beta Pruning.**



Technology Stack : Python 3

Results



Evaluation Methodology

