

Artificial Intelligence for Robotics

- Homework 11 -

Prof. Dr. Erwin Prassler
Daniel Vázquez

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1. Answer the following questions:
 - What is a strategy ?
 - What is the goal of Max agent?
 - What is the goal of Min agent?
 - What is the Minimax Theorem?
 - How do we construct a strategy for Max?
 - How do we construct a strategy for Min?
 - How do we find the best strategy ?
 - How does the Minimax algorithm work ?
 - Is the Minimax algorithm affordable for chess? Why?
 - What is alpha-beta pruning?
 - Is the alpha-beta pruning method affordable for chess? Why?
2. Implement a Connect-4 game to demonstrate the use of adversarial search for deterministic, fully observable, two player turn-taking zero-sum games. You must implement a **minimax** and a **alpha-beta pruning** agent that play against you and each other. Compare these two approaches based on their search time, space requirement and other information that you think is important.