**Artificial Intelligence for Robotics**
**Week 6**

**Assignment**

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1. A heuristic function is one that estimates the cost of the path from a node to the closest goal state. If the node is the goal state, the cost is 0.

2. The misplaced tiles method takes into account only the fact that the tile is misplaced and not the distance of this misplaced tile to the desired goal. Therefore, a tile closer to the goal is treated very similarly to a tile that is very far from the goal. The Manhattan Distance method takes into consideration how far a misplaced tile is from its desired goal. This leads to better outcomes.

3. A Greedy Search algorithm is a search algorithm that uses a heuristic that helps the algorithm make an optimal choice at every iteration/stage of the algorithm. This type of algorithm does not produce an optimal solution for all problems, but they may provide optimal solutions over a reasonable amount of time.