

Motion Planning

1 – Motion Planning is to design robots' movement to do some specific task. For example, avoiding collisions, grabbing an object by moving joints of arm accordingly etc.

2 – The result of Action Planning is the set of actions which lead us from initial state to the goal state. On the other hand, Motion Planning deals with movement of an agent. For example, how this robot will move its joints to grab the object or how it will avoid collisions.

3 – Deformable objects: objects need to find a way to squeeze themselves in order to avoid collisions (Duck and Teapot).

Protein Folding.

Herd following the shepherd or people getting into their cars and leaving without colliding with each other.

CAD applications.

4 – First the goose will be moved to some of these islands because it creates the most invalid states. Then the farmer will come back and take fox and beans one by one to the other side of the river. Lastly, it is possible to take the goose from the island and bring it to the other side of the river.