

### HW3 - CSCI 545

Q5.

- By increasing the value of radius, we observe that the planar arm will not be able to reach the desired posterior. This is because our joint angle bounds does not allow the planar arm to have any angle value less than  $-\pi$ . So, the robot arm will choose the only other possible means and try to reach the closest pose to desired pose.
- If we are to change the initial configuration, the planar arm will try to identify the path most efficient to reach the desired posterior. If the initial configuration itself is in the obstacle, the algorithm works as it fails the constraint and thus, the pose of initial configuration itself is changed.