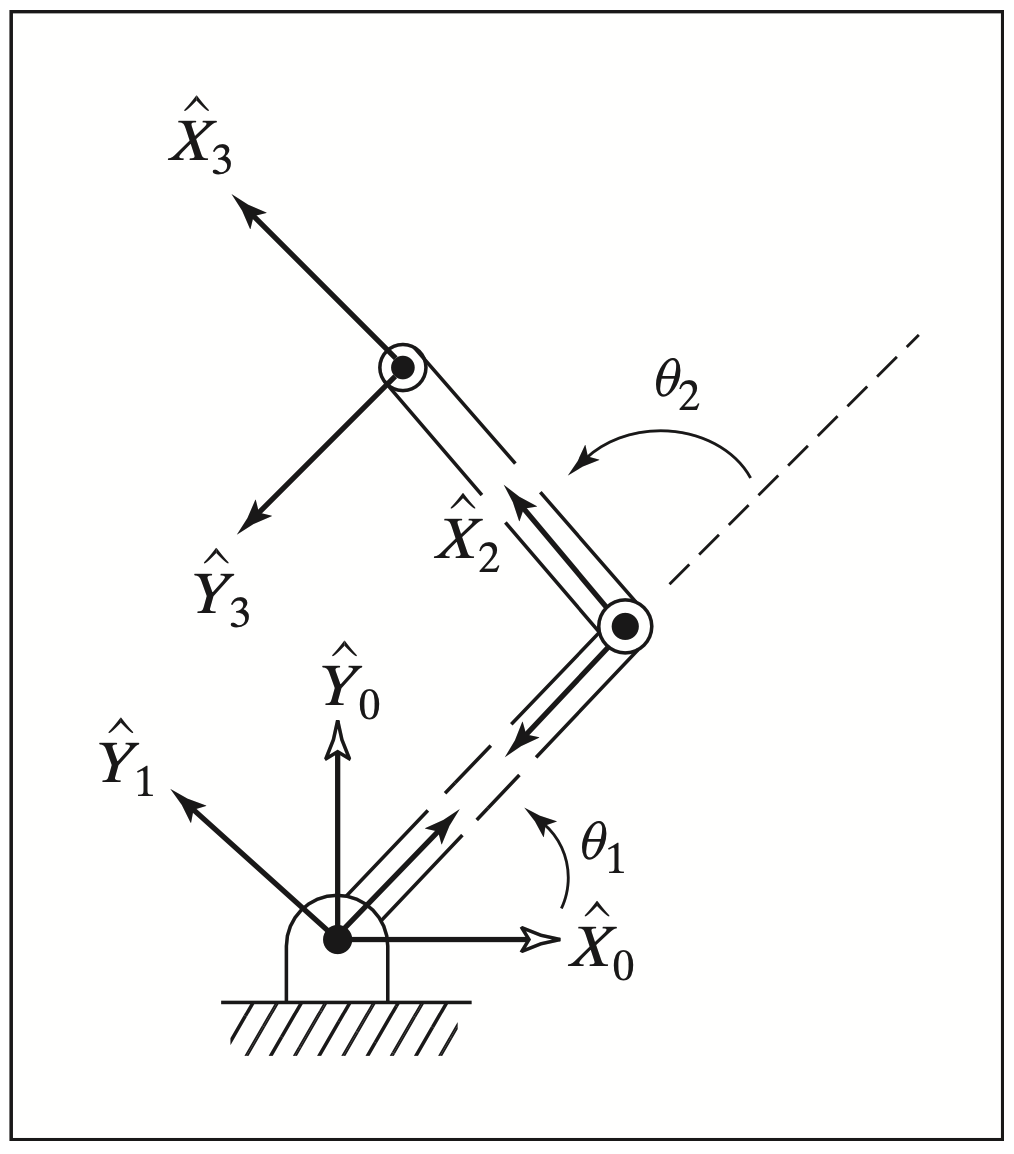
A robotic arm has two links with , and . The end effector needs to move from point A [-1.2, 0.9] to B [1.1, 0.8].

1.2 m

0.8 m

A [-1.2, 0.9]

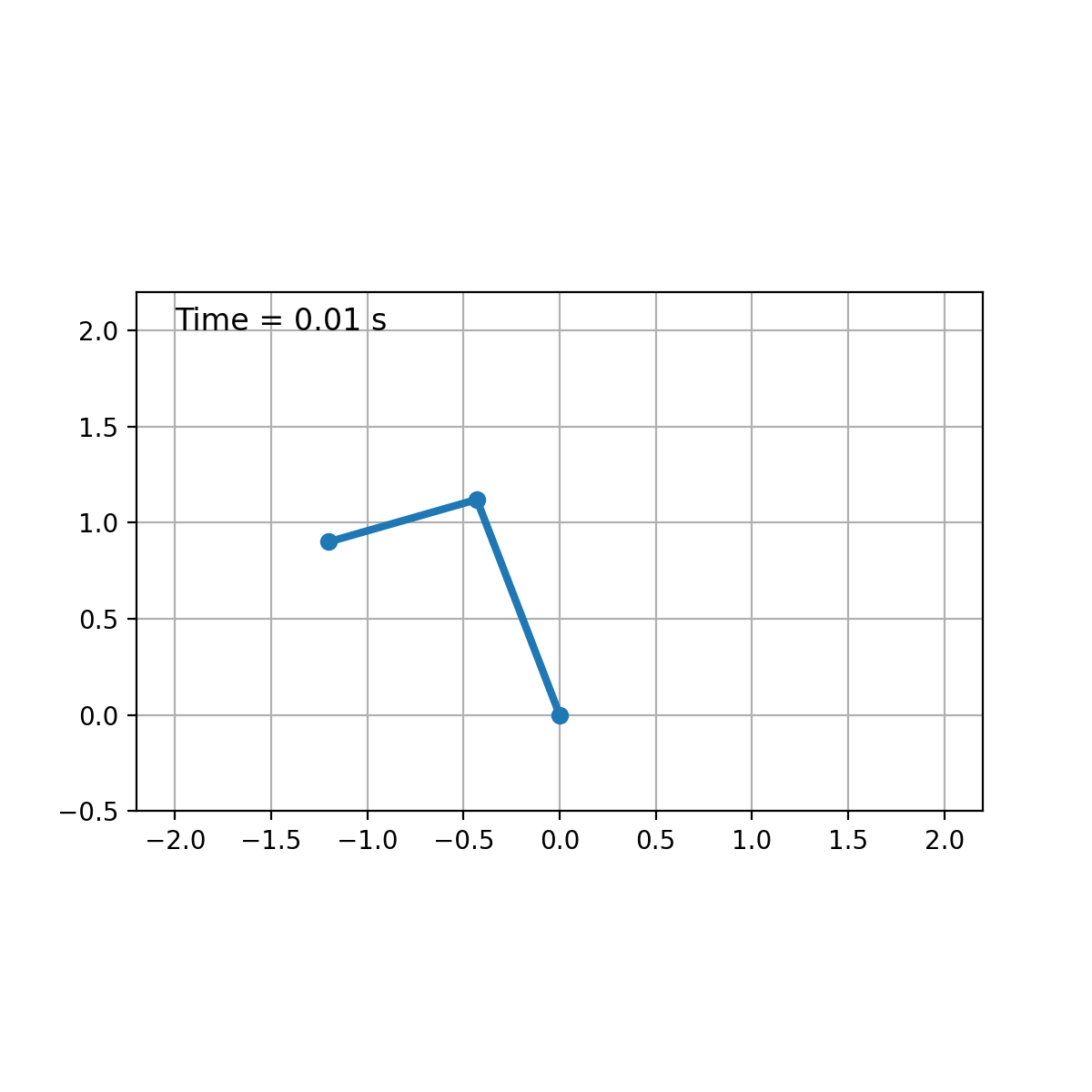
B [1.1, 0.8]



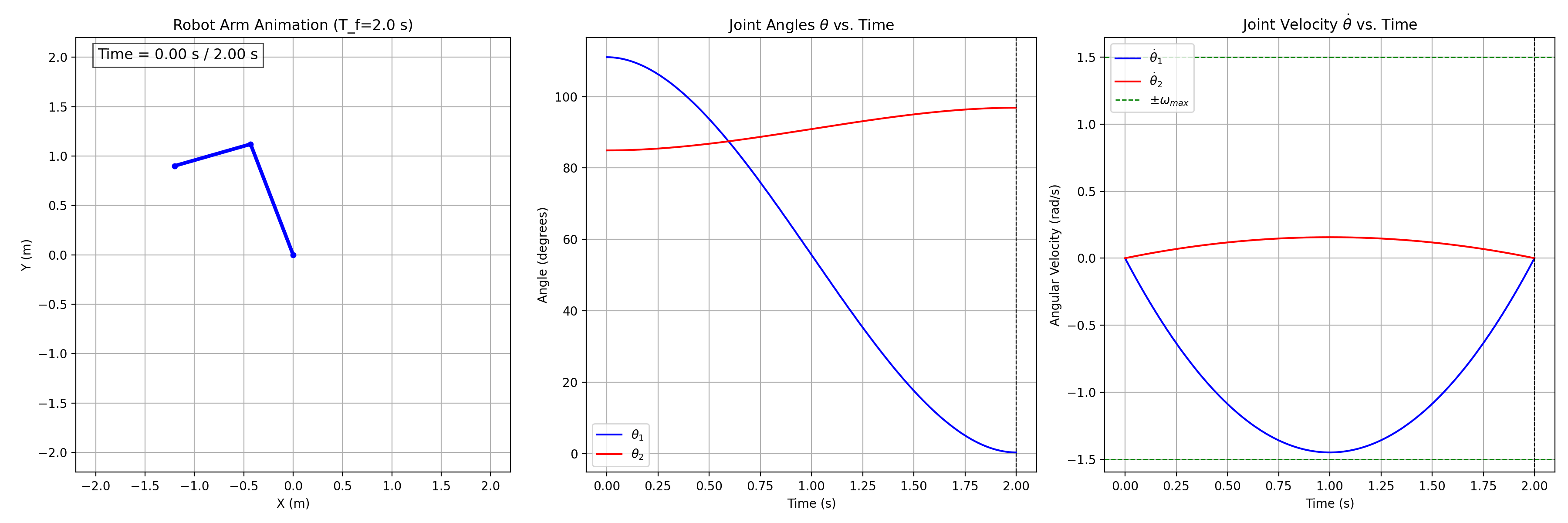
=45°

=80°

1. Please use basic linear interpolation method. The maximal acceleration of each joint is and the maximal speed of each joint is . Please plot the result with angles and vs. time. Please also animate the final result.



2. Please do the same with third order polynomial interpolation method. This time, it is required to get to the destination within 2 seconds. Did you see any difference between those two? What does those differences mean?



3. Now there is a via point C [0, 1.3] and it is required to get there by 1 s with angular velocity of -1 rad/s in both and . The whole process takes 2 seconds. Please plot the result and show the animation.

