Fuzzy Controller Project Check-In

Summary of the problem

Take the robot from its initial position to a defined final destination position.

What are the inputs?

x-coordinates of destination position. y-coordinates of destination position.

What are the outputs?

Angular velocity of the robot.

Forward force of the robot.

Weight of the membership functions.

Robot's coordinates change to final destination's coordinates.

What are the constraints?

Since this controller is based on fuzzy logic, a lot of the data points are inaccurate and not precise. So, the system's integrity is compromised to an extent.

What things did you have to define because it was not specified?

The angular velocities and forward forces at which the robot should be moving in accordance to the distance to the destination.

Identify an ethical concern that must be considered in development to avoid issues when it is loose.

Since the robot is told to set a specific speed to travel distances of increasing length to cut down on time. In reality, this could be dangerous due to pedestrians, traffic and traffic/jaywalking laws that are enforced. We also need to consider the weather effects on the machine, and if it would or wouldn't work in mild to extreme weather conditions.