SC 627 Assignment 4 Instructions

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Reference

Lecture Slides titled "03-08-2022.pdf" (Find a copy in MS Teams under General $->$ Files $->$ Class Materials)

Problem Statement

Robotic Networks in Balancing

- Environment and Robot Definition
  - Number of Robots $N = 8$
  - Fixed Left Robot Position $R_1 - (0, 0)$
  - Fixed Right Robot Position $R_8 - (14, 0)$
  - Magnitude of Maximum Robot Velocity $V_{max} = 0.15m/s$
- Each Moving Robot R_i can access robot pose data for robots R_{i-1} and R_{i+1} at every instance
- At each instance (as frequently as possible) command a velocity vector (V_{x_i}, V_{y_i}) for every moving robot R_i such that the robots are balanced (equidistant from each other).
- Plot each robot's x-coordinate as a function of time

Requirements

To be added soon!

*Implementation To be added soon!

Submission

- Submission Deadline: $\mathbf{10^{th}}$ *April*, 2022 (For both Assignments 3 and 4)
- After creating the 'assignment_4' folder as described above run the following commands from the terminal
  - cd path_to_catkin_ws/src/sc627_assignments
  - git add .
  - git commit -m "assignment4_final"
    Assign this message only to the final version of your submission
  - git push -u origin master
    Verify that the folder is added to your github repository (online)
  - git log -pretty=oneline
    Copy the first string (the long one!) to the spreadsheet against your name under the appropriate column (`https://docs.google.com/spreadsheets/d/1bZN23JUzaHuUMvjP4L_9tu9Io85-VPG4_kNK7A25fTY/edit?usp=sharing`)