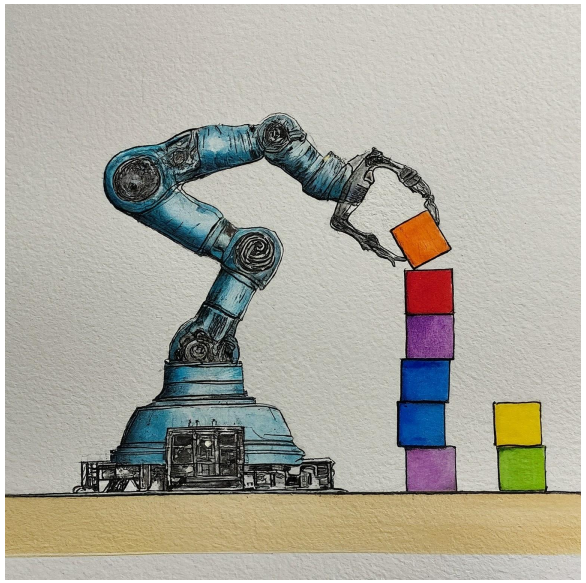
Lab 2 - Introduction to Motion Planning

ICAPS 2024 Summer School



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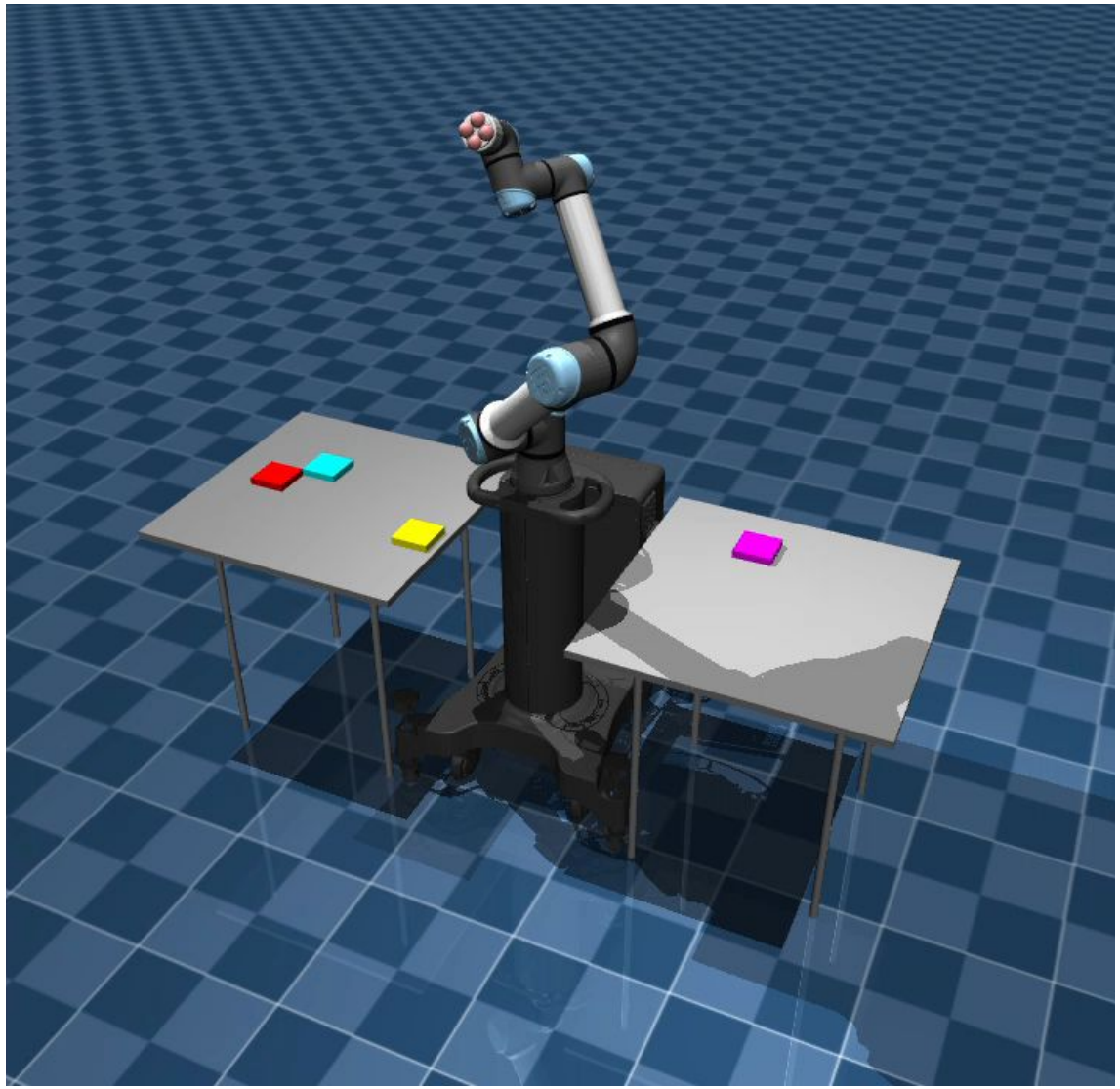
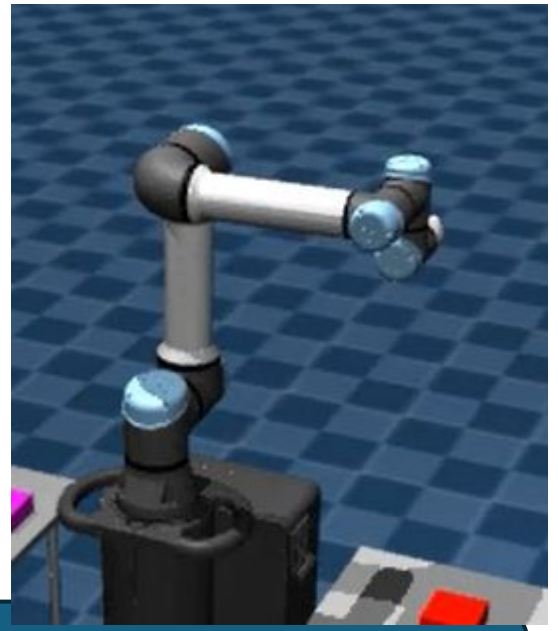


Intro to Our MoJoCo Environment

- Read and run the notebook until you finish with the first exercise.
  - you should not succeed.
- When you get to ***Actions in Our Simulated Setting*** run the next cell before you read, this cell takes a while to run
- You are encouraged to work together, help each other and talk!

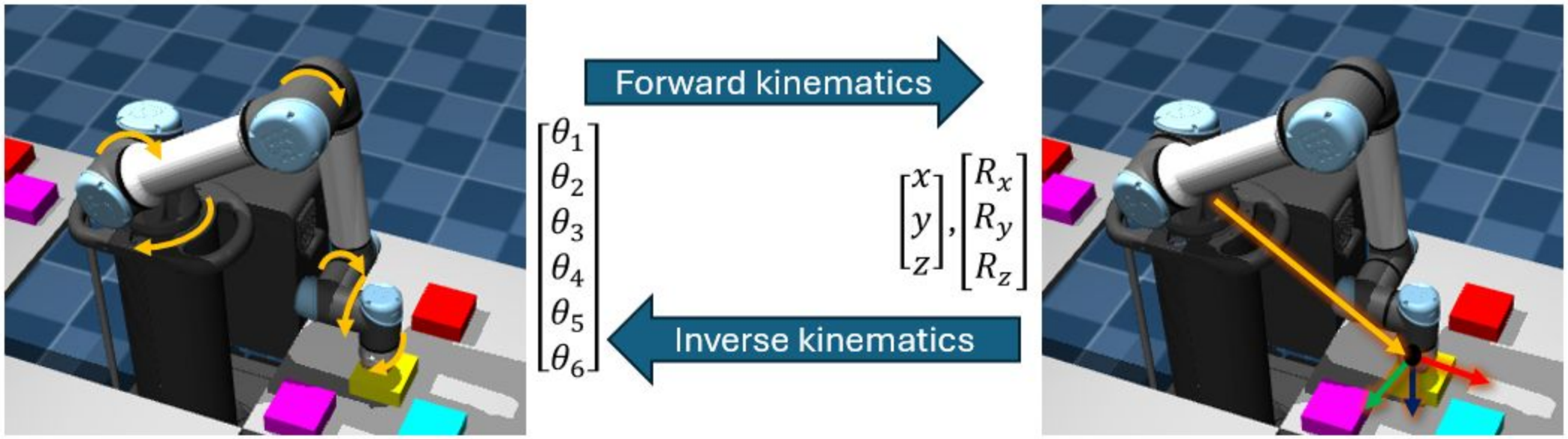


~25-30 minutes

Forward/Inverse Kinematics

~10-15 minutes

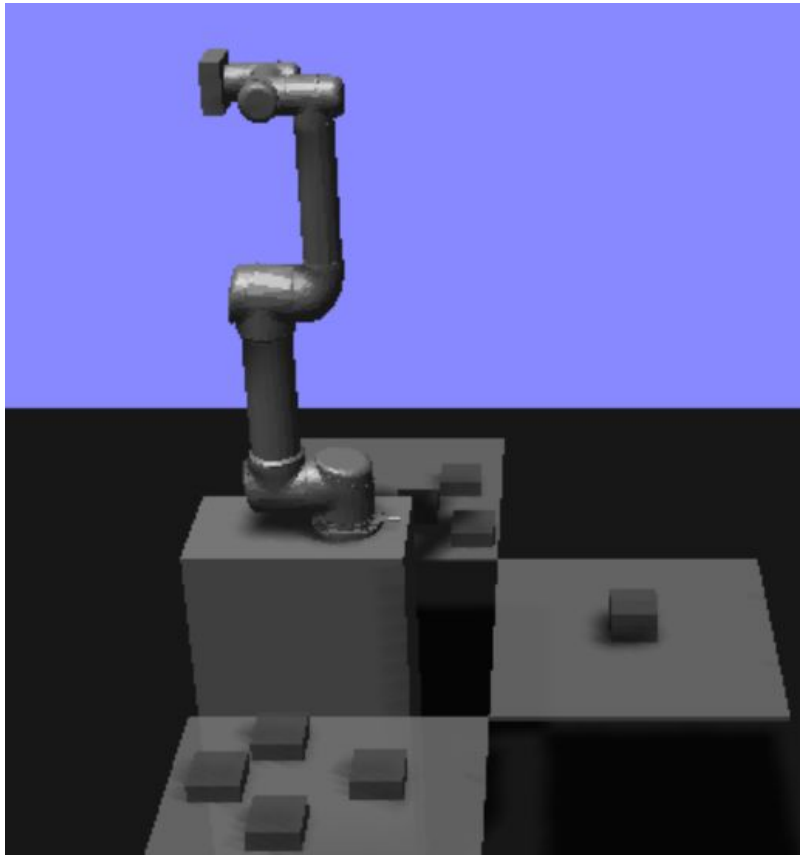
- Continue until you finish the next exercise, and read until “Motion Planning”
- Again, if you complete the exercise correctly, what you see shouldn’t be a successful movement



Motion Planning

~30 min

- Continue until you finish the next exercise
- You can keep playing with the motion planner if you still have time
  - see what other arguments you can pass to it
  - If you still have time, you can dive into the code: https://github.com/CLAIR-LAB-TECHNION/ICAPS-24/blob/main/motion_planning/motion_planner.py

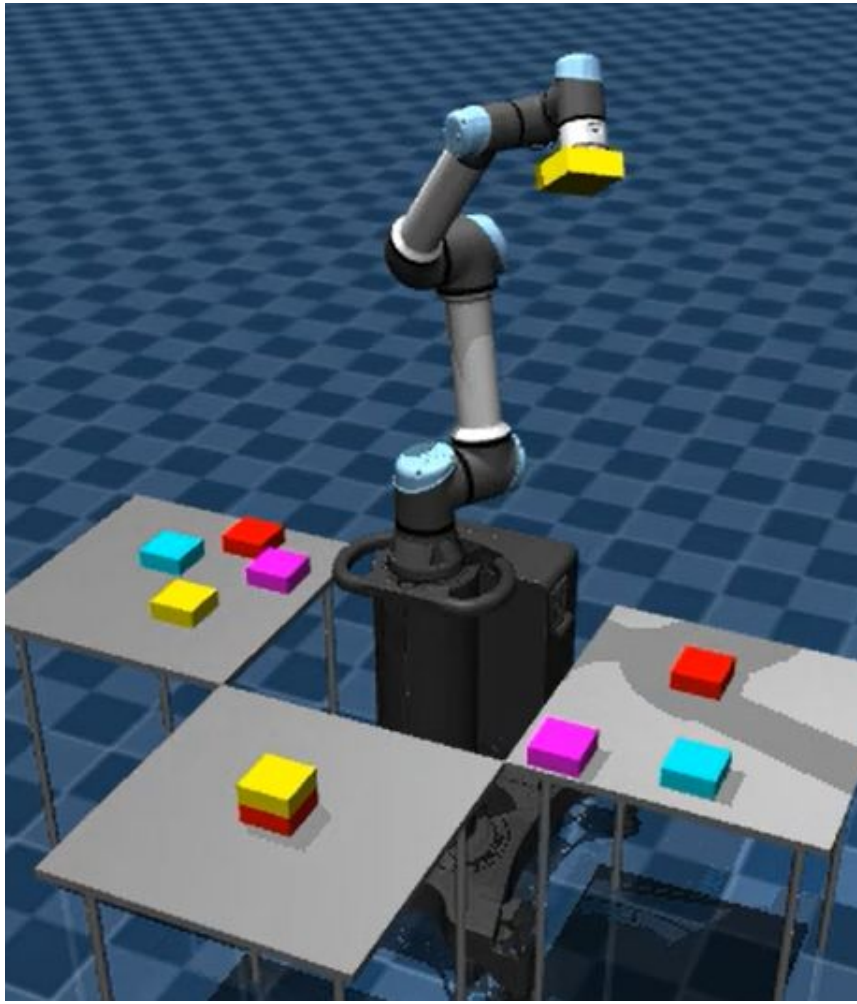


Path execution

~10 min

- Is the path optimal?
  - **Why?**
- You can run the cells that creates the plan, for the same start and goal, and then try to execute the path again and see the difference.

Why do we get different paths ???



Wrapping it all up

All the time we got left

- Please take your time to read the code carefully. Make sure you understand what we are doing
- There is not always success!
- Don’t forget to reset the environment after every trial
- If you got time left, play with it a little bit, try to build a tower on another table, or try to build a higher tower