

CS 309: Autonomous Intelligent Robotics FRI I

Lecture 8: AI as Search and PDDL Part 2

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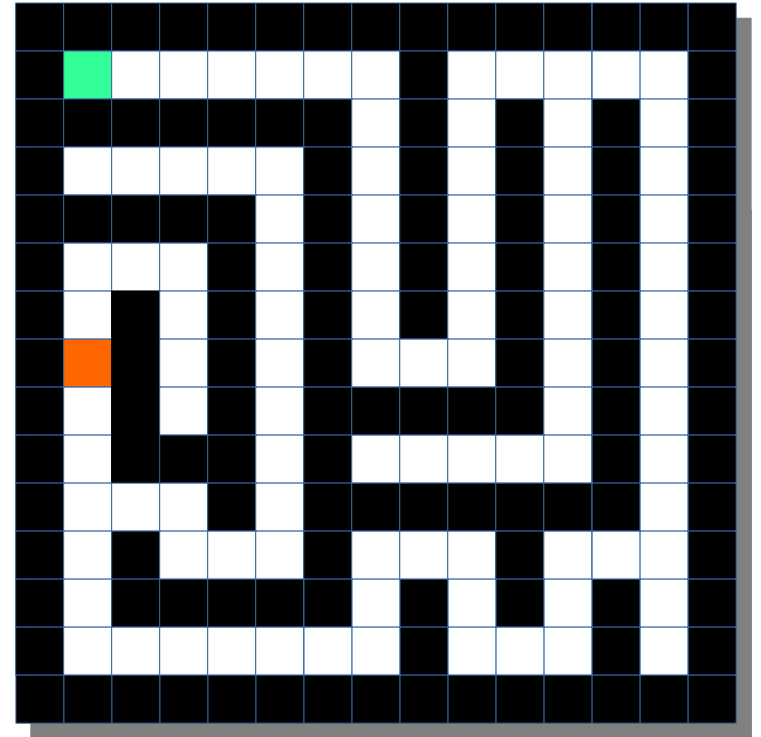
http://justinhart.net/teaching/2018_spring_cs309/

A couple of quick notes

- Before we start, are there questions about the homework?
- First reading responses due Monday instead of Wednesday to give you more time for the homework.
- We will do the first ROS lecture on Thursday and move the reading discussion to Monday.

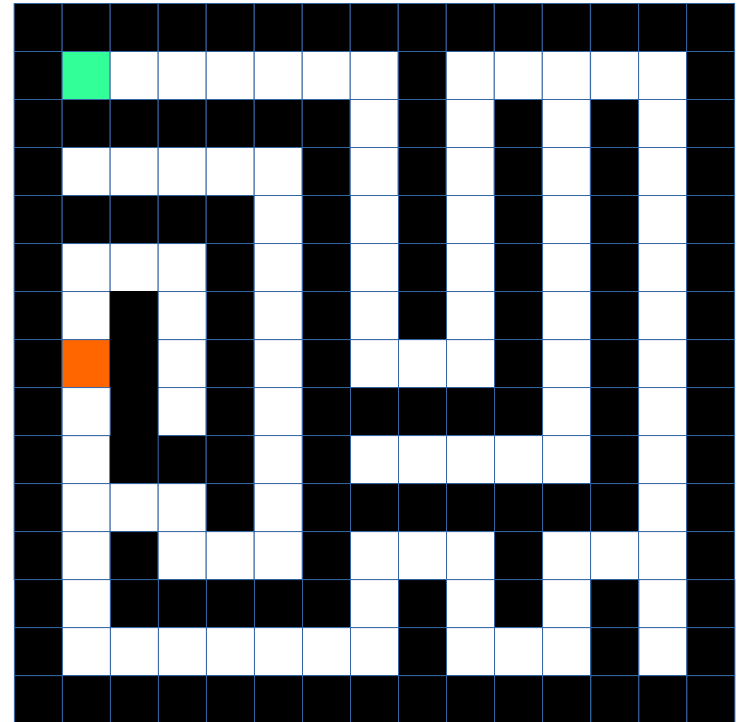
Last time: AI as search

- Search algorithms attempt every action whose preconditions are met.
- These action are put into a queue then tested in the same way.
- This happens until a sequence of actions leads to the goal.

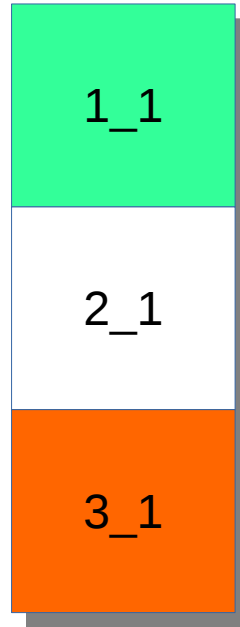


A*

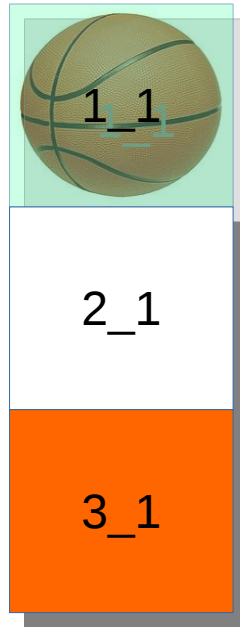
- Prioritizes the “best” points according to a heuristic
- (On this maze, A* would look the same as Depth-First Search)




Hallway



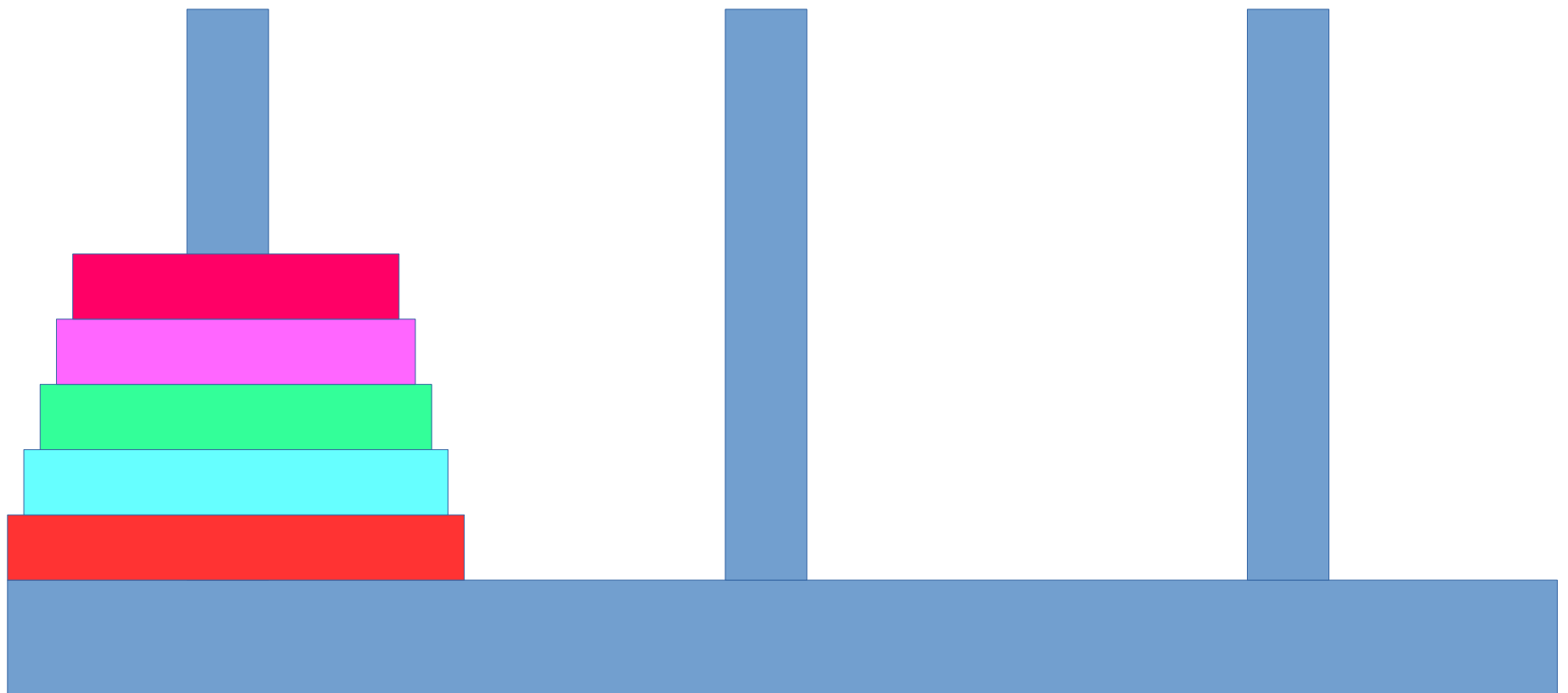
Hallway



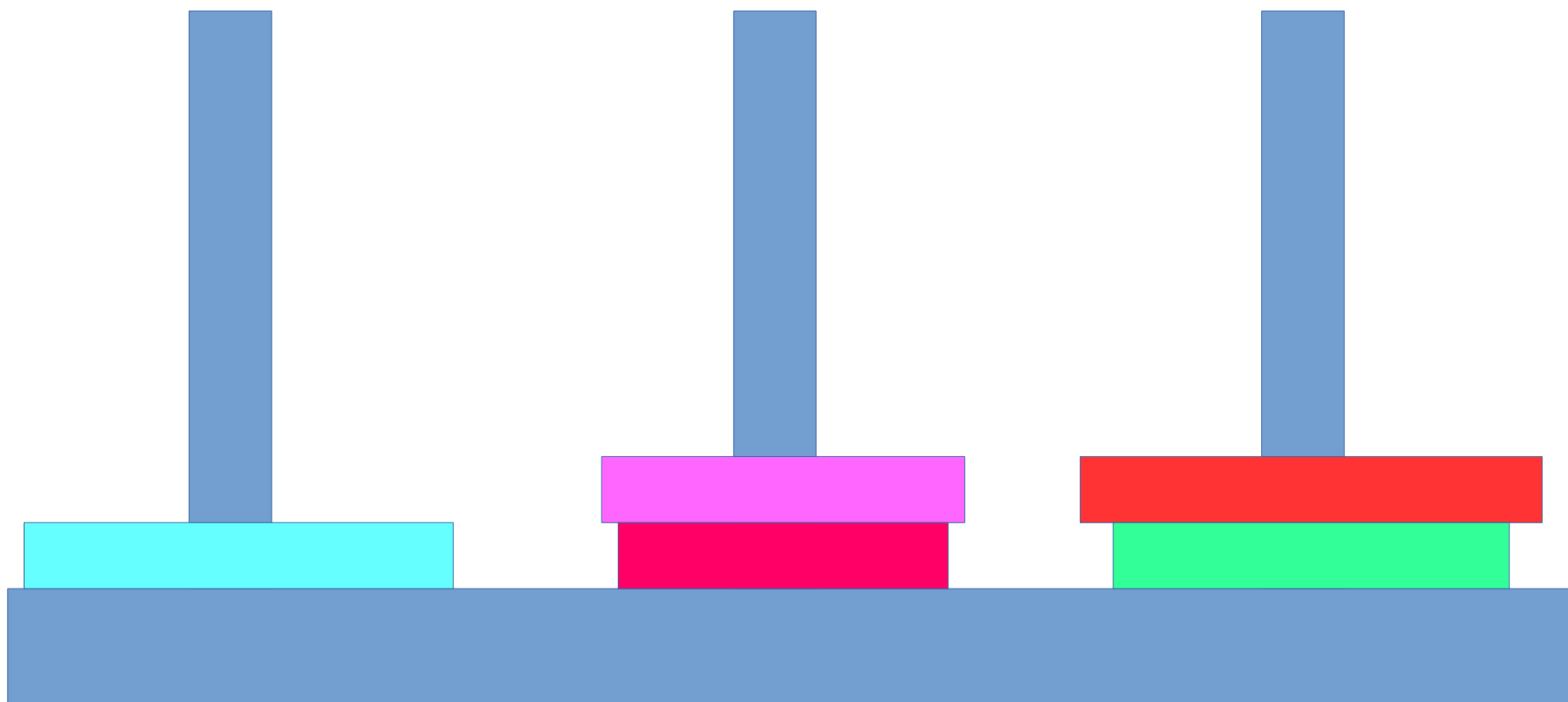
 1_1	1_2	1_3
2_1	2_2	2_3
3_1	3_2	3_3

1_1	1_2	1_3
2_1		2_3
3_1	3_2	3_3

Tower of Hanoi



Tower of Hanoi



Tower of Hanoi

- Rules
 - Three posts
 - However many disks
 - Goal: Get all of the disks on the same post, with the biggest disk on bottom and progressively smaller disks towards the top.
 - Main constraint: You can only stack a disk onto a smaller disk
- Okay! Let's write this!