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(</learn/robotics-motion-planning/home/welcome>)

Introduction and Graph-based Plan Methods



CJ Taylor

Welcome to Week 1! In this module, we will introduce the problem of planning routes through grids where the robot

▼ More

Introduction



1.1: Introduction to Computational Motion Planning 5 min

(</learn/robotics-motion-planning/lecture/hE9C7/1-1-introduction-to-computational-motion-planning>)



Meet the TAs 24 sec

(</learn/robotics-motion-planning/lecture/7zvfD/meet-the-tas>)

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Computational Motion Planning Honor Code

(/learn/robotics-motion-planning/supplement/WC0M4/computational-motion-planning-honor-code)



MATLAB Tutorial I - Getting Started with MATLAB

(/learn/robotics-motion-planning/supplement/JMxDP/matlab-tutorial-i-getting-started-with-matlab)



Resources for Computational Motion Planning

(/learn/robotics-motion-planning/supplement/uYYXI/resources-for-computational-motion-planning)

Graph-based Path Planning



1.2: Grassfire Algorithm 6 min

(/learn/robotics-motion-planning/lecture/ZxAgg/1-2-grassfire-algorithm)



1.3: Dijkstra's Algorithm 5 min

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1.4: A* Algorithm 7 min

(/learn/robotics-motion-planning/lecture/Vv9fL/1-4-a-algorithm)



Quiz: Graph-based Planning Methods 4 questions

(/learn/robotics-motion-planning/exam/zZvks/graph-based-planning-methods)



MATLAB Tutorial II - Programming

(/learn/robotics-motion-planning/supplement/0CF0I/matlab-tutorial-ii-

programming)

✓ **Assignment:** Graph-based
Planning 3h 00m

(/learn/robotics-motion-
planning/programming/UNHm0/graph-based-
planning)

▶ **Getting Started with the**
Programming
Assignments 5 min

(/learn/robotics-motion-
planning/lecture/L3Yf2/getting-started-with-the-
programming-assignments)