Get Me Out of Here: Determining Optimal Policies

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Motivation

How to exit the labyrinth as fast as possible?

Figure: Labyrinth - The Game
Dynamic Programming:
- Given: grid map $M = \mathbb{Z}^n \times m$ containing static walls $M(i, j) = 1$ and exit(s) of the labyrinth, set of actions $\mathcal{A} = \{\leftarrow, \rightarrow, \uparrow, \downarrow\}$
- Determine optimal policy $\mathcal{P} = \mathbb{Z}^n \times m \rightarrow \mathcal{A}$ to exit the labyrinth
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Your task:
- Literature review on Dynamic Programming for robotic motion planning
- Comparison to other path planning algorithms
- Implement the Labyrinth scenario
- Implement the dynamic programming algorithm

Finally: Exit the labyrinth using the optimal policy!

⇒ Any questions? Interested? Feel free to contact me!
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