



Real-time goal recognition using approximations in Euclidean space

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Problem

- Most recent efforts on goal recognition focus on discrete (STRIPS-style) domains.
- Comparatively fewer online goal recognition approaches work in both discrete and continuous domains.
- Those approaches often rely on repeated calls to a planner at each new observation.

Objective

Develop an online goal recognition approach that can be applied in real-time applications.

Continuous Domain

- In the offline stage, we use RRT* to generate viapoints and connect each one of them using a fifth-degree polynomial order.
- In the online stage, we compute the Euclidean approximation to compare the observations.

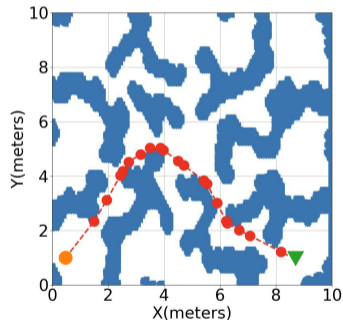


Figure 1: RRT* output example.

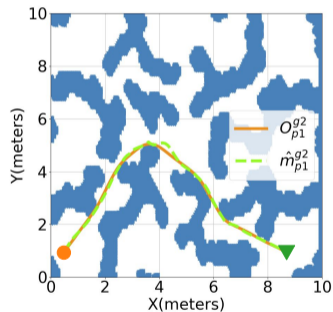


Figure 2: Contrasting approximate \hat{m}_{p1}^{g2} and optimal O_{p1}^{g2} trajectories.



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