Freespace Planning without Obstacles #2950

Answered by TakaHoribe **osholsonel20** asked this question in **Q&A**

osholsonel20 on Oct 14, 2022

What are some parameters to tune in Autoware AI's freespace planner so it can generate paths more effectively in an "open costmap" scenario? I'm finding that even when not providing it a pointcloud and making the costmap blank, it still takes some time to generate an astar path for the vehicle to drive. And most of the time the path is not flat, it's very curved.

Any ideas on what attributes I can tune in astar_search launch node?

↑ 1

Answered by **TakaHoribe** on Oct 17, 2022

Tuning the minimum_turning_radius to fit your vehicle could improve the performance. However, the `astar_search` in the autoware.ai is inefficient because it performs a path search with only one curvature.

Improvements to `astar_search` are being made in autoware.universe. The

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TakaHoribe on Oct 17, 2022 Maintainer edited

Tuning the minimum_turning_radius to fit your vehicle could improve the performance. However, the `astar_search` in the autoware.ai is inefficient because it performs a path search with only one curvature.

Improvements to `astar_search` are being made in autoware.universe. The latest version allows planning to account for multiple curvatures and has been confirmed to be more efficient in almost all cases. Some test cases are shown in the readme.

Note: the `aster_search` package was renamed to `freespace_planning_algorithm` to cover several algorithms like RRT*.

Marked as answer ↑ 1 ❤️ 2 1 reply

osholsonel20 on Oct 18, 2022 Author

Thank you! Exactly what I needed!

Answer selected by **satoshi-ota**