An Egocubemap Based Algorithm for Quadrotors Obstacle Avoidance Using a Single Depth Camera

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Global Overview of the Algorithm

New Depth Input → Egocubemap Construction → Configuration Space Expansion

Trajectory Tracking

Trajectory Selection → Trajectories Generation → Directions Preselection

Frame Specific Goal
Global Overview of the Algorithm

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Results

Test 75% Completed

<table>
<thead>
<tr>
<th>Time(s)</th>
<th>E(W)</th>
<th>LinearDist(m)</th>
<th>TotalDist(m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>74.0</td>
<td>0</td>
<td>176.7</td>
<td>185.0</td>
</tr>
</tbody>
</table>

No Collision

\[ |v| = 3.58 \text{ m/s} \]