

Project title: **Path Planning and Autonomous Flight for UAVs**

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**Abstract:** This project focused on implementing and evaluating various path planning methods for UAVs in dynamic and unpredictable environments, primarily utilizing sampling-based approaches like Rapidly-exploring Random Trees (RRT), RRT\*, MACRRT\* and the A\* graph search algorithm. These methods were tested in a ROS2 simulation environment provided by WASP AS course, and also in a custom-built ROS simulation environment integrating the teb\_local\_planner library and the Open Motion Planning Library (OMPL) for realistic scenarios involving altitude considerations, static and dynamic obstacles.

**WARA Connection:** Connected to **WARA Public Safety (WARA-PS)**