

# Path Planning For Autonomous Vehicles

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<https://github.com/JonnyD1117/ros2-py-path-planning-server>

*Abstract*—The objective of this project is.....???

*Index Terms*—A\*, path planning, mobile robots, autonomous vehicles

### I. INTRODUCTION

THE world of robotics is full of constraints, demands, and performance trade-offs that humans handle naturally on a daily basis.

### II. PATH PLANNING FOR MOBILE ROBOTS

#### A. Motivation

### III. PATH PLANNING ALGORITHMS

#### A. Graph Search

- 1) A\*:
- 2) Dijkstra's Shortest Path:

#### B. Rapidly Exploring Random Trees

- 1) RRT:
- 2) RRT\*:

#### C. Probabilistic Road Maps

### IV. PATH SMOOTHING

### V. WAY POINT GENERATION

### VI. ACKNOWLEDGMENT

### REFERENCES

- [1] J. Clerk Maxwell, A Treatise on Electricity and Magnetism, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73.