

Autonomous Robotics Behavior in a RoboRescue Course

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ABSTRACT:

The purpose of autonomous robotics in the military is to minimize the harm that we subject our soldiers to. This use of robotics covers a broad spectrum of technologies and fields of study. The end state of this project was to take an older military robot that required human interaction and through the use of Labview integration with its own onboard computer system, make the robot determine the most open path through which to travel and then execute the stored commands so that it navigates the course and accomplishes the mission it was set out to do. Since this was a military robot, it had the capability of being used to accomplish many missions to include but are not limited to, assisting in rescuing a human soldier, route reconnaissance, and disarming IEDs. At the end of our time at ARL, we were able to accomplish our goal of unleashing the Matilda robot into a controlled maze setting and let it navigate autonomously out of the maze.

KEYWORDS: Matilda, autonomous robotics, military robotics, Lab view

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