

SWARM MULTI-ROBOT SYSTEM FOR WAREHOUSE APPLICATION

OBJECTIVE

A swarm multi-robot system for Acme's warehouse application aimed at improving safety in a warehouse environment through multi-agent collision avoidance and path planning capability.

APPROACH

The swarm multi-robot system uses:
RVO2 for collision avoidance.
ROS2 Humble for implementation
and Gazebo for simulation.
Turtlebot3 Burger as the simulation robot.

IMPACT

Acme corporation is the primary stakeholder.
The software impacts the working conditions of the warehouse employees.

MEASURE OF SUCCESS

No collision among the swarm multi-robot system.
Minimal time for each robot to reach the goal position