



Programming of an autonomous mobile robot (AMR) for warehousing (BA,SA, MA)

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Task Description:

Autonomous mobile robots (AMR) play an essential role in the automation of existing warehouse infrastructure. They can flexibly adapt to the existing environment and changes in their surroundings. Therefore, they do not require costly adaption of the core warehouse system.

In this work, a Kuka youBot shall recognize items in its surroundings and decide whether they are obstacles to pass or items to put into storage. Further, the AMR must transport them and put these items in the right place in storage.



Therefore, this thesis includes the implementation of a camera vision script enabling the detection of items and a path-planning task to navigate the robot. Besides, a logic shall be derived that supports the distinction between obstacles and warehouse items.

Preliminaries:

- Experience in robot programming with C++ beneficial
- Experience in path planning and camera vision is beneficial but not necessary
- Interest in recent research and application of robotics



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