

Super fancy title about RL and manipulation

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Master Project Proposal

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1 Introduction

Service robots are slowly becoming more popular, mostly small robots with limited functionality like vacuum cleaner robots. Bigger service robots that could help in a household environment are still much in development. These service robots need to be able to perform many complex tasks, in all kinds of environments, while doing them safely by not colliding with objects, humans and itself. Tasks like navigating, speech recognition, following/recognizing humans, object detection/recognition and manipulation are all important parts for a service robot, and these tasks are tested in competitions like the Robocup and RoCKin [REFS].

- This project is focused on manipulation by using reinforcement learning.
- Calculation to create a path is slow, not always results on valid solution. Cartesian control is dangerous.