

Robotics 2017

Project Proposal

As a team, write a proposal for your project. It should have the following sections:

Title: Find a nice, catchy title for your project

Abstract: A short abstract/ summary what the project is about

Introduction: Very general description of your project. Motivation why such a project is interesting.

State of the Art: Find literature and open-source-ROS packages relevant to your project. Per team member:

- * present and cite three papers with just two or three sentences
- * present in more detail one further paper relevant to your project. Describe it with at least 1/3rd of a page.
- * present in detail one open source ROS package relevant to your project. At least 1/3rd of a page

So basically this will be about one page per team member – with three persons the state of the art alone would then be 3 pages. Of course, within one team you cannot describe the same paper/ algorithm/ software twice.

System Description: Describe your idea and proposed system & algorithm in detail. Also identify areas & problems where you don't know yet how to solve them.

System Evaluation: Describe how you want to test your system. Most likely you will make some experiments – describe them here already. Very important: Also come up with measures that you define “what is a successful system”. For example: pick up in total 3 object within 10 minutes. Or: Drive “full speed” for 10 minutes along a square with some people traffic without crashing.

Work Plan: Make a plan for your project. Define some mile stones. Plan when you want to do which phase. Possible phases: Algorithm design, implementation, testing, evaluation, documentation – some of those things can also happen in a loop (iteration).

Conclusions: Short summary and conclusions

Important dates:

November 1st, 22:00: due date for the proposal

December 13th (6 weeks later): due date for the final report (project 1 finished).

Please be careful when writing this Proposal – most of it can later be re-used for the project report! Please don't forget to take pictures and videos when testing your system.

The proposal has to be written in English using LaTeX. The state of the art part is extremely important – you can find out which open source software and algorithms you can use for your project and how other people solve similar problems.

Use git to collaborate for the project and proposal and to submit it! According repos have been created: use `ssh git-teaching@robotics.shanghaitech.edu.cn` to find out about the name (usernames plus _p1). There, create a folder called “docs” and in “docs” create a folder called “proposal”. Place all needed LaTeXsource files there as well as the created pdf file. The LaTeX file should be called “proposal.tex”.

Additional task: In the root of the _p1 repo create a file called “info.txt” with the email addresses, pinyin names of the group members as well as the project title.