Robotics 2023

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 three or four 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 objects within 5 minutes. Or: Make a map with an error of less then XXX (XXX depends on how you measure the error. Get inspired on how other papers do it).

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).

In the end there will be the following deliverables, that you can already mention here:
- Proposal (this document)
- Mid-term report
- Final demo
- Final Report
- Website

Conclusions: Short summary and conclusions

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! Each group will get one (or more) shared projects in gitlab. Create a "doc" folder in one of them to upload the proposal, mid-term report, final report, website, each in their own folder.

Place all needed LaTeXsource files there as well as the created pdf file. The LaTeX file should be called "proposal.tex".

Additional task: Be sure to fill in the "Readme.txt" in the project with all the relevant info about your project:
- Team Name and Members; email addresses
- Documentation and how to's regarding your project.