Robotics Spring 2024

Project Report
(intermediate and final)

As a team, write a report for your project. It is written in LaTeX and in English, extending your proposal. It should have the following sections:

Title: Find a nice, catchy title for your project
Subtitle: "A project of the 2024 Robotics Course of the School of Information Science and Technology (SIST) of ShanghaiTech University \\
\url{https://robotics.shanghaitech.edu.cn/teaching/robotics2024}"

Authors: Name all authors, including email addresses

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: The same requirements as the proposal (you have a chance to improve on the state of the art section – make sure that you follow the requirements thoroughly – read the proposal requirements again!)
Additionally, present at least **one more paper** (in total, not per person) with at least 1/3 a page relevant to your problem.
Write the state of the art like a paper – do not identify individual students/ mark who wrote what.

System Description: Describe your idea and system & algorithm in detail. Also write which problems you overcame. Also add a subsection describing your ROS packages and code in some detail (at least one page). Make sure you have an image of your hardware (if so) – identifying all the important parts.

System Evaluation: Describe how you want to test (final: tested) test your system. Most likely you will make some experiments – describe them here. At least show some first results. Very important: Also come up with measures that you define "what is a successful system". For example: pick up in total 3 objects within 10 minutes. Or: Drive "full speed" for 10 minutes along a square with some people traffic without crashing.

How To: Include a section with detailed description of how we can re-produce your project. So answer questions like: Where is all the code. (Maybe: where is the hardware, which hardware exactly). How to use the code – how to compile and run it. What pre-requisites are needed to run it. Etc.

Conclusions: Short summary and conclusions. Including future work (things that should/ could be done to improve the system).

Submission: Your report has to be done in LaTeX. Your citations have to be collected into a separate .bib file! In your report repo create four folders: "intermediate", "final" and "webpage".
Put your files in the according folder, make sure to submit the .tex file, the .bib file AND the .pdf file!

Important dates (see the webpage for the most current dates!!!). Submissions every 24h after the due date get 33% score deducted! Make sure not to commit in the according folder after the respective due date!

May 26th, 22:00:   due date for the intermediate project report
June 25th, 22:00:   due date for the final demo. (You are welcome to do it earlier!)
June 28th, 22:00:   due date for the final report. (You are welcome to finish it earlier!)
June 28th, 22:00:   due date for the webpage. (You are welcome to finish it earlier!)

Grading for the projects (total 50% of course)**:**

- Paper Presentation: 5%
- Project Proposal: 5%
- Intermediate Report: 5%
- Weekly project meetings: 10%
- Final Report: 10%
- Final Demo: 10%
- Final Webpage: 5%

Report grading details:

All relevant sections there: 10%
Proper problem and system description: 10%
Length of the state of the art section: 10%
Proper content of state of the art section: 10%
Proper system evaluation: 10%
Proper Conclusions: 10%
Convincing project success: 10%
Nice images & graphs: 10%
English grammar & spelling: 10%
Overall style and look: 10%