Homework 5
Intro to Robotics

Write a report on designing one robotic system to solve two of the five tasks in the attached Tasks.PDF.

Your report should include:

- Which tasks you are solving
- Robotic system schematic drawing (10 pts). The drawing should include all necessary hardware components such as robots and sensors and where they should be positioned.
- Selection of robots, gripers, and sensors (10 pts). Provide a list of selected hardware in detail and the rationale of your selection. You should include the models of your hardware selections.
- Modeling (10 pts). Provide steps of modeling your robotic system and how to obtain all necessary information of software design.

- Software architecture schematic drawing for two of the five tasks (20 pts). Provide the detailed components of your software architecture and how they are connected.
- Provide running flowcharts of your software for the two tasks (30 pts). It should include all steps such as perception, motion planning, trajectory generation, and error handling.
- List of ideas (10 pts). Provide a list of five ideas you want to explore but are not in your current solutions.
- List of challenges you anticipate (10 pts). Provide a list of five challenges you anticipate your robotics system will not be able to overcome.

More information about the tasks could be found in the papers at the end of the task descriptions. The homework is discussed regularly in class.

Submit your report as a PDF file.