ME 221, Fall 2022
University of California, Riverside
Department of Mechanical Engineering

Project Rubric

1 Presentation

During your presentation you should address the following:

1. (10%) Application, task, and background
2. (10%) Robot model and simulation environment
3. (25%) Controller architecture
4. (25%) Trajectory generation
5. (30%) Results

2 Final Report

The final report should consist of a short paper no longer than 4 pages and written in the style of a conference paper. The manuscript must be prepared using the IEEE conference template, either using Microsoft Word or LaTeX, and should include the following sections:

a. **Abstract.** A single paragraph summarizing the paper's content, including a concise introduction of the topic, outline of the major results, and summary of the conclusions.

b. **Introduction.** This section should provide context for the project and include a summary of related work. Make sure to answer the following: Why is the problem interesting, what question does your project aim answer, how is it challenging and what related work has been done before?

c. **Methods.** Here you should provide a detailed description of all the techniques used to generate your results. Include a description of the robot, task, and simulator, and supporting figures. Provide details of the algorithms used to complete the task with visual aids (e.g., block diagram of the controller).

d. **Results and Discussion.** Present and discuss the results of your project. Include figures to support your results. Provide context and interpretation.

e. **Conclusion.** Restate your research question, the methods used, and your major findings. Contextualize your results in terms of what has been previously done.

f. All code must be included in an appendix and also submitted as `.m` files.

Your final report will be graded as follows:

1. (15%) Clear and organized presentation
2. (20%) Problem description
3. (25%) Solution (methods) description
4. (25%) Results description including supporting materials
5. (15%) Overall difficulty