Safe Autonomy Final project: Deliverables and evaluation

November 30, 2020
Plan for today

+ Presentation
+ Video
+ Report form
+ Evaluation
Final project can be worth 15% to 25% of your course grade.

Midterms + Project = 40% = max(15 m + 25 p, 25 m + 15 p)

Project score break-up and components:

1. Presentation 40% [Dec 7 and 9th]
2. Video 20% [Dec 12th]
3. Project work 40%
   + Report
   + Q&A
   + Peer evaluation

We do **not** require any additional **project reports**. This document gives you information on logistics and evaluation of the last two items. Please read carefully.
Your group will be allocated a slot (17 mins) for presenting your class project on Dec 7 and 9th to the whole class

After your presentation your team will breakout into a separate room for Q&A (5 minutes). Then, we come back and join the next presentation.

You have to attend all the presentations and complete an online peer-evaluation form. This will contribute to the presentation grade.

All members of the team are not required to deliver the talk. But, it should be made clear how the work was organized.

Pointers on giving great talks: https://users.cs.duke.edu/~brd/Teaching/Giving-a-talk/giving-a-talk.html. Don’t forget to practice.
## Presentation schedule

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Dec 7ᵗʰ Mon</th>
</tr>
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<tbody>
<tr>
<td>2:00 pm</td>
<td>Group 3</td>
</tr>
<tr>
<td>2:25 pm</td>
<td>Group 1</td>
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<tr>
<td>2:50 pm</td>
<td>Group 7</td>
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<table>
<thead>
<tr>
<th>Day 2</th>
<th>Dec 9ᵗʰ Wed</th>
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<tbody>
<tr>
<td>2:00 pm</td>
<td>Group 5</td>
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<tr>
<td>2:25 pm</td>
<td>Group 6</td>
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<tr>
<td>2:50 pm</td>
<td>Group 4</td>
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Video

+ You have to submit a **3 min video** showcasing the salient parts of your project
+ Actual downloadable video file required, not just the link.
+ Examples here:
  + [https://www.youtube.com/watch?v=YGSe4cUfq6Q](https://www.youtube.com/watch?v=YGSe4cUfq6Q)
  + [https://www.youtube.com/watch?v=nGu2odkB5ws](https://www.youtube.com/watch?v=nGu2odkB5ws)
  + [https://www.youtube.com/watch?v=v4qVNCGoMnI](https://www.youtube.com/watch?v=v4qVNCGoMnI)
Report form

Fill out a Q&A form (1-2 sentences)

+ Project title
+ What is the most impressive/exciting part of your project
+ Roughly how many hours did your team spend on the project related activities and how are those hours distributed across the members?
+ What were the top 5 most time consuming activities?
+ What code did you have to write? List them if there are several modules and give the rough number of lines of code.
+ What data did you collect?
Evaluation

For all three components of the project (presentation, the video, and the actual work done) we are looking at the following five dimensions:

1. **Organization**:
   - The project should cover: A clear problem statement, an approach, metrics for evaluation, safety implications of the work, references to previous works
   - Cites references Provides explicit url to videos and code that we will link from [https://publish.illinois.edu/safe-autonomy/projects/](https://publish.illinois.edu/safe-autonomy/projects/)
   - Teamwork. How did the team members contribute?

2. **Professionalism and preparedness**:
   - Quality of **presentation/video** should be professional, well-written, delivered, and edited
   - What are the takeaways/punchlines?
   - How well were the questions handled?
Evaluation (cont.)

3. Technical and intellectual merit of the approach: Why was the problem and your solution hard/interesting? What was the technical result? What insights were used? We expect this to be the heart of the talk/video.
   - Describe a clear and well-thought out problem statement, formulation
   - Explain the approach you used, even if it feels redundant (e.g., explain how the controller you implemented works)
   - Walk through the engineering steps you took to achieve your goal
   - Citations to relevant related work

4. Execution Effort
   - The Report Form will have questions related to this
   - How much effort was put in?
   - What code was written, reused, what data was collected?

5. Results: We will assess your work based on the experiments and analysis that you provide in the results section. We hope to see the following:
   - Effective and informative plots
   - Insightful discussion and/or analysis of safety
   - Thoughtful pros and cons of your approach and what future work would be to make this a viable (and safe!) autonomous system out in the real-world