This assignment has multiple due dates, outlined at the end of this document.

1 Summary, Purpose, and Parameters

The purpose of this assignment is to give you a first experience in performing an in-depth research project. Upon completing this project, you will have experience in performing all of the elements of a research project, including:

- managing student-advisor interactions
- generating research ideas
- seeing a project through from start to finish
- giving a research presentation
- paper writing

We recommend that you work with your GRA advisor on your main project: for one, it saves time because the research itself will be performed outside of this class. However, don’t feel as though this is a hard constraint if it is inconvenient for you; you are welcome to work with any faculty member who is willing to advise you on research for the term.

The rest of this document summarizes the milestones for the project and their due dates.

2 Milestones

The initial report should indicate (1) the title of the project and (2) the name of the faculty member with whom you are working.

The interim report should include:

1. A one-paragraph problem statement: why is the problem interesting, important, and challenging?

2. A summary of (a) what you have accomplished so far, (b) what remains to be done on the project, (c) any obstacles you foresee in accomplishing the remaining tasks.

3. You should include a draft of the related work section of your paper. This literature survey should be one full page and have at least fifteen references.
The presentation slides should correspond to the 15-minute talk you will present at the mini-conference at the end of the term. Your talk should have all of the components of a good talk, which we will cover in class on October 15. The grading of this part of the project (the talk and the slides themselves) will be based on your adherence to the principles that we describe in this lecture.

The final project writeup should be a 6-10 page writeup that summarizes the work you have completed for your main project. The writeup should be formatted in the accepted conference format for your main conference. Think of your writeup as a “mini-conference paper” that might eventually form the basis of an eventual conference paper submission. This writeup should have all of the components of an actual conference paper, which we will cover in class on October 12. The writeup will be graded based on your adherence to the criteria for writing a good research paper, which we will present in this lecture.

### 3 Important Dates and Grading

All milestones are due by email to the TAs. No exceptions! The quality of each of these components of the project will collectively determine your overall project grade.

<table>
<thead>
<tr>
<th>Date</th>
<th>% of Grade</th>
<th>Milestones</th>
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</thead>
<tbody>
<tr>
<td>October 8</td>
<td>5%</td>
<td>Initial report</td>
</tr>
<tr>
<td>October 20</td>
<td>5%</td>
<td>Interim report</td>
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<tr>
<td>November 26 (5 p.m.)</td>
<td>5%</td>
<td>Talk title and abstract due to TA</td>
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<tr>
<td>December 1 (12 p.m.)</td>
<td>40%</td>
<td>Presentations slides due to TA</td>
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<tr>
<td>December 8</td>
<td>45%</td>
<td>Final report</td>
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