

# Research Skills (CSC 595)

Project (with several milestones)

Multiple due dates (see end of document)

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## 1 Purpose, Advisor

One of the best ways to acquire and refine skills is to try them out in the wild. The purpose of this assignment is for you to gain experience doing research by performing an in-depth research project. During the course of the project, you will gain experience with:

- generating research ideas (both problems and solutions),
- managing interactions with your advisor,
- managing your time by seeing through a project from beginning to end,
- giving a research presentation,
- writing a paper.

I highly recommend that you work with your advisor on the project. This way, whatever research you are doing with your advisor can also count for this course. That said, if you prefer to do the project with another faculty member who is willing to advise you, then you are welcome to do so.

The remainder of this document covers milestones and due dates.

## 2 Milestones

The **initial report** should indicate:

1. the title of your project;
2. the name of the faculty member with whom you are working (i.e., the advisor for your project).

The **interim report** is also Mini-Assignment 3. The official details of what to submit will be available once Mini-Assignment 3 is released. Here is a tentative guide to give you an idea about what the interim report will include:

1. *Problem statement*: one paragraph explaining why the problem is interesting, important, and challenging. The underlying purpose of this is similar to the motivation given in the Introduction section of a paper.
2. *Progress-to-date*: a summary of
  - (a) what you have accomplished so far;
  - (b) what remains to be done;
  - (c) any obstacles you foresee in accomplishing the remaining tasks.
3. *Related work*: include a draft of the related work section of your paper. This related work section, which is a literature survey, should be one full page and have at least fifteen references.

The **presentation slides** are the same slides that you'll use for your 8-minute talk in the mini-conference at the end of the term. Your talk should have all of the components of a good talk. In class, I'll give a lecture on how to give a great talk. The grading of this part of the project (the talk *and* the slides themselves) will be based on your adherence to the principles that I describe in this lecture.

The **final project writeup** should be a 4–10 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 I'll cover in a lecture. The writeup will be graded based on your adherence to the criteria for writing a good research paper, criteria which I'll present in the aforementioned lecture.

### 3 Important Dates and Grading

All milestones are due by 11:59 p.m. via submission to Brightspace. No exceptions! The quality of each of these components of the project will collectively determine your overall project grade.

Date	Milestones
September 23	Initial report
October 21	Interim report (Mini-Assignment 3)
November 18	Presentations slides due
December 8	Final report