

# Term Project

**Project Intention Document Due:** October 8th 12:30pm PT

**Project Midpoint Check-in Due:** November 5th by 12:30pm PT

**Final Writeup Due:** December 11th Anywhere on Earth (AoE)

## Introduction

Over the course of the quarter, you will work in groups of 2–3 to conduct original research in the area of Sociotechnical Cybersecurity.

This document will discuss the expectations and major checkpoints for this assignment, as well as provide you with rough guidelines on how to conduct open-ended research in this area. This project and its constituent parts are worth 50% of your grade in the course.

## Forming a Group

Projects should be conducted in teams of 2–3 students. You can choose to work with whoever you like in the class—there are no pre-assigned groups. You can use our open Piazza thread to find groupmates: <https://piazza.com/class/m1gzv19afza3f9/post/5>.

If you would like to work alone, you must meet with Deepak in advance to get this approved. There must be a very good reason for wanting to work alone—part of the learning objective for this course is working collaboratively on research.

## Project Options

You can choose between two different project options in the course, an open-ended option or a platform-centered option. The expectation of effort for both options is the same—the latter simply provides more structure while the former is more open-ended. The project milestones, submission requirements, and grading criteria are the same for both options. Both are detailed below:

### Option 1: Open-Ended Research Project

In this option, students will come up with their own, original research idea and execute on the idea as a team. The idea must be thematically related to the material in the course in some way—students choosing this option will be asked to justify its relevance to the course in the project intention and midpoint check-in document.

Students will be expected to do the following:

- Come up with a research idea area relevant to the topics presented in the class
- Read and synthesize related papers to the topic area
- Create a research plan that details the hypotheses, data, tests, systems, designs, or other research effort required to complete the project
- Identify how to define whether the project was successful (this should be more specific than simply “I finished the project.”)
- Execute the research plan

## Option 2: Platform Harms Measurement Project

In this option, students will conduct a *platform measurement project*. This project involves the selection of a specific type of harm and a platform, the creation of an automated detector for identifying that harm, and a thorough analysis of the platform guided by specific research questions.

Students will be expected to do the following:

- Identify a social platform of interest (broadly defined) and a specific harm that occurs on the platform. Selection of the platform should take into consideration availability of data or ease of data access
- Read and synthesize related papers that have studied this platform in the past
- Create a research plan that details the research questions you are seeking to answer, the data you are planning to collect, the hypotheses that you plan to test, and the analyses that you plan to conduct to answer your research questions
- Design and build an automated detection mechanism to identify the harm you are interested in studying. You can use any tools you like, but it should be specifically evaluated with your platform in mind
- Identify how to define whether the project was successful (this should be more specific than simply “I finished the project.”)
- Execute the research plan

If you are already conducting research in this area with a faculty member on campus and wish to use your ongoing research as a part of your course requirements, please discuss this with me in advance of submitting your project intention form.

## Milestones

There are three main milestones for this project: a project intention form, a project midpoint check-in document, and a final presentation and document. Each is detailed below:

### Project Intention Form (10%)

This form is worth 10% of your overall grade. It commits you to a group in the class and sets the main direction for your project. You can find the project intention form here: <https://forms.gle/TQY9AHQLzfaJC6Tc7>. This is due by **October 8th at 12:30pm PT**.

### Midpoint Check-in Document

This 2-page document is worth 10% of your overall grade and describes your current status on the project. This will serve as an opportunity for you to describe what you have done so far. The structure of everyone’s documents may vary, but the sections that **must** be included are:

- An introduction which frames the problem you are studying
- A related work section detailing prior work related to your topic
- The research plan and what your current status is for accomplishing your research goals

You should use the USENIX Security Overleaf template for this document: <https://www.overleaf.com/latex/templates/usenix-2023/hhvnskcxstwq>. This document will also serve as the baseline for our midpoint check-in conversation which will happen at some point the week of *November 4th*. This document due by **November 5th at 12:30pm PT**.

## Final Presentation and Writeup

Students will be required to put together a 10 minute presentation on their projects, to be presented in the last week of the quarter (December 3rd and December 5th). The presentation will be followed by a question & answer session of approximately 3 minutes, depending on how many groups need to present. This presentation is worth 15% of your overall grade. You will be graded based on clarity of presentation, the rigor of your research project, and how well you handle audience questions. A more concrete rubric will be shared closer to the presentation week.

After the presentation, you will put together a 5-page document which details the progress you made over the course of the project. This report is worth 15% of your overall grade. The details of this document will vary from team to team, but the sections that **must** be included are:

- An introduction which frames the problem you are studying and presents the topline findings of your research
- A related works section which details the prior work related to your topic
- A methodology section which discusses how you set out to answer your research question
- A results section which documents your findings
- A discussion and future work section which puts your findings in the context of prior work, and details what future work might exist in this area.

## Conclusion

Ultimately, this project should help you get exposed to conducting original research in Sociotechnical Cybersecurity topics. The course staff are available by appointment to discuss your ideas and help you to frame and shape your work as necessary. Have fun!