

1. Course Projects

The goal of the project is to deepen your knowledge in one area of computer systems research. You can work in groups of 1-3 peoples of your choice on the project.

2. Project Types

The project can take one of three forms:

2.1 Survey

Your project will survey the major research results and directions of a particular systems research's area. You will need to identify the area, propose a set of 6-10 papers for that area, read the papers, and write a 6-10 page report. The report should emphasize breadth in the **area**, **classify the approaches** and **techniques**, **distinguish contributions** made by the various research projects described in the papers, and hypothesize about potential future research directions.

2.2. Proposal

Your project will propose a novel direction of research. You will need to identify the area, propose a set of 4-6 papers to read as background, and write a 5-10 page report. The report should start with a brief summary of previous and related work, describe the problem or questions you propose to investigate or answer, justify why they are important, and then outline a methodology for conducting the research. The methodology should include an approach for conducting experiments (e.g., simulation, analytic modeling, instrumentation, measurement, implementation), a set of experiments to perform, and a discussion explaining how the experiments investigate the problem or answer the questions.

2.3. Implementation

Your project will implement an idea proposed abstractly or theoretically in a paper, or conduct further experiments that extend work in a paper. You will need to identify the paper, propose an implementation project or set of experiments to perform on an existing implementation, and write a 4-6 page report. If you would like to continue a set of experiments on an existing implementation, I will help you obtain a copy of the implementation from the appropriate research group (internally or externally). The report should summarize previous work, state the problem you are investigating, and then describe the implementation or set of experiments you performed. If you performed experiments, you should clearly describe your experimental methodology and the results of your experiments.

3. Project Proposal

All students are required to complete an individual or group research project as part of the course requirements. In preparation, each group should submit a proposal for the project, which includes the following:

A brief description of the project

1. Motivation
2. Current Status (if it is an ongoing project)
3. Objective (for this semester)
4. Difficulties expected in the course of the project

The project will culminate with a presentation at the end of the semester.