

CSC 450, Senior Research Research Outline

1. Write an **outline** for your paper, by completing the template below. An outline consists of section headings, subheadings, and bullet points. Each bullet point should be a single sentence that will be expanded on when you write your paper. If appropriate, an alternate set of section headings can be used with my approval. The *Results* section contains an unbiased presentation of the results (a direct presentation of the data from following the methods), and includes new methods or simulations, if this is part of the research. The *Discussion* section interprets the results, puts them in the context of the topic, and discusses their significance, limitations, and future work (see notes for an example).

Using the template below, replace all bullet points in italics.

Project Title: _____

Name(s): _____

I. Introduction (must include at least 2 citations in IEEE format)

- a. Background (add at least 2 facts that provide necessary background)
 - i. *Background point #1*
 - ii. *Background point #2*
- b. Problem statement / objective / hypothesis
 - i. *Description of your problem statement, objective, or hypothesis*
- c. Significance (add at least 2 points that describe the significance of your specific project)
 - i. *Significance point #1*
 - ii. *Significance point #2*

II. Materials and Methods (add at least 4 points describing the methodology in detail)

- a. *Method description #1*
- b. *Method description #2*
- c. *Method description #3*
- d. *Method description #4*

III. Results (describe at least 3 graphs or tables that will be presented; graph descriptions must include x and y values; table descriptions must include descriptions of columns and rows).

a. *Figure or table description #1*

b. *Figure or table description #2*

c. *Figure or table description #3*

IV. Discussion (related work includes at least 2 citations in IEEE format)

a. Summary of your main (expected) findings

i. *Expected finding #1*

ii. *Expected finding #2*

b. Related work (describe and cite at least 2 related findings that will be discussed in the context of your results)

i. *Related finding #1*

ii. *Related finding #2*

c. Limitations (include at least 2 limitations related to your project)

i. *Limitation #1*

ii. *Limitation #2*

References (add a bibliography for the references in your outline using IEEE format)