CSC 450, Senior Research
Critical Evaluation of a Research Article

Select a *research* article related to your topic. You should aim to find a research article that will be described and commented on in your Related Work section of your Literature Review.

The article must be a ***research*** article published in an academic journal or presented at an academic conference that either (1) contributes to the field of computer science or (2) is an application of computer science that contributes to another field. *The article cannot be a review article, patent, book, thesis, or other type of work*. In general, a *research* article is an article that applies a methodology to answer a specific question. However, if the methodology involves only summarizing what other people have done, then the article is NOT a research article, but may be a *review* article. If the methodology cannot be described, then the article is NOT a research article.

Don't hesitate to ask if you are unsure of whether or not a specific article is appropriate or if you need help finding an article. If you submit an invalid article, you will be allowed to resubmit with a 15 point penalty.

You should be prepared to spend some time on selecting an appropriate article that is relevant to your topic. Consider whether the article is useful to you by first reading the abstract, then looking at all figures and tables. You may then choose to look at specific sections of the article for more information.

Note that you are not expected to understand the entire article; indeed, part of learning to read academic articles is to be able to abstract away the details that are not necessary for understanding the bigger picture. (For example, if you have an article comparing two different sorting methods, you probably do not need to understand the details of each method, at least at this point).

Once you decide on an article, you must upload the article to Perusall to the Article Critique folder. You should read through the article (and may need to read through it multiple times), and complete the following. *You must use the labels below in your Piazza comments*.

1. If you have any questions as you are reading, highlight the relevant text and ask! These questions should be clearly labeled with QUESTION.

2. Highlight and comment on text related to the research problem that the paper attempts to address. In other words, highlight and comment on the goal of the research. These comments should be clearly labeled GOAL.

3. Highlight and comment on the significance of the problem (why is the problem important)? These comments should be clearly labeled SIGNIFICANCE.

4. Highlight and comment on the author's thesis or major findings. That is, what is he/she

trying to convince you of? What are the claimed contributions of the paper? If the paper contains multiple findings, which is common, you should select the most major one. These comments should be clearly labeled FINDING.

5. Highlight relevant methods and/or results that support the author's major claims (as you define them in the previous question. How does the author go about trying to convince you of the thesis? Are you convinced of the validity of the author's claims? These comments should be clearly labeled METHODS (Note you only need to comment on methods related to your FINDING in (4)).

6. Highlight and comment on related work. How does the research described in the paper differ and/or build from the other work? These comments should clearly be labeled RELATED WORK.

7. Highlight and comment on limitations of the research described in the article. What are two potential questions or research projects that follow from this work. (These may or may not be stated in the article) These comments should be clearly labeled LIMITATION/FUTURE WORK.