Related Work

In this module of the course, we will be considering the Related Work section. This section should detail what is already known about your problem area, its theory, practical applications, the popular research and the rest of knowledge that has been determined and collected by investigators before you.

While positioning your work, the point of this section is demonstrate your mastery of the subject area. Here, you weave a story from articles in the literature that describe the major events of the problem such as its discovery, early thinking and early solutions, tools, algorithms, etc., which have been applied to the problem in some way. From each of your articles, you will mention some important piece of information to be used to build the some foundational area for your own work.

The "Related Work" section is also a story that you provide the reader to show that you are familiar with the background and general research associated to the problem you propose to study. This discussion will allow the reader see how your research is connected to other types of current research. You can read more about this section from the following resources:

- McDaniel’s lecture notes at Pennsylvania State University,
- Lee’s presentation (U Penn)

Part 1 (March 3rd): Literature Review, Due by March 10th

Peer-Reviewed Articles

To drive the message of relevance and importance of your own work, and to explain how it is linked to other types of research, you will cite peer-reviewed articles from the literature. These articles will help to explain the origins of the problem by its theory and/or practice and relevance. Your literature will be primary source articles which have been retrieved from peer-reviewed publishers. Be sure to choose up-to-date articles to help situate your own work as modern and cutting-edge. There are occasionally articles that you will need to cite from the original times of your problem area, however, in general, try to keep to the recent material.

Your Task

Using articles you have already read and discussed in this course and collecting more relevant articles, you are first to produce disjoint bullet points of literature review. Select at least eight articles
that can help situate your proposed project, then for each article answer the guiding questions below in a bullet point format.

1. What is the article about?
2. What was the methodology, tools, theory and etc. used in article’s research?
3. What were the results and their implications?
4. How is the article relevant to your own work, approach, tool, etc.? How is the article in support of your own work? Why are you talking about this article?

Peer Interviews

Once you have identified 3–4 articles and thought through your answers about them, class members are to interview each other using the questions above and are to provide feedback to extend the logical thinking of the review and comment on the perceived relevance of the chosen articles.

Part 2 (March 5th): Extended Outline Development, Due by March 10th

In the style that you used to create your Introduction section, you will be creating and editing an outline of the “Related Work” section to fill-in the a significant portion of the foundation of your work using peer-reviewed articles. Specifically, you will use the bullet points of your literature review from “Part 1” to plan out the introduction and conclusion of each of your supporting articles and determine where your answers fit in. You will return to this outline to build on the points from the articles to create a cohesive “Related Work” text in your proposal. Please write your outline directly in the “Related Work” section of your SeniorThesisProposal.tex file located inside your project proposal repository.

Peer Interviews

Once you have identified another set of 3–4 articles and thought through your answers about them, class members are to interview each other using the questions above and are to provide feedback to extend the logical thinking of the review and comment on the perceived relevance of the chosen articles.

Part 3 (March 10th): Peer Review of the Outline, Due by the end of class on March 10th

During our class session on Tuesday (March 10th), you will participate in the peer reviewing process, where your colleague will peer review your developed outline. During this process, a reviewer will complete a peer review checklist, included below.

1. The outline covers the Related Work section of a computer science senior thesis proposal.
2. The outline includes a main idea.
3. The outline includes a list of the topics and major points that support the main idea, for example, types of relevant research and specific articles to support each type of relevant research.

4. The outline includes supporting arguments and evidence for each topic or point, for example, each article summary includes the description of the article, its methodology and key findings.

5. The outline includes concluding ideas, for example, how specific research type is relevant to the proposed work.

6. The writing plan for the Related Work section has a logical flow.

Part 4 (March 10–April 9th): Writing the Related Work

Before our class session on March 24th you are to complete a draft of your Related Work section. For each point made in the outline, you are to add detail and relevant discussion to expand upon the material from the outline. You are to use the assessment points below to evaluate the completeness of your Related Work section.

1. At least two pages of text in the Related Work section of a computer science senior thesis proposal are included.

2. The Related Work section clearly describes the research that is relevant to the proposed study.

3. For each article (or a set of closely related articles) discussed in this section it is clear what the article aimed to accomplish, how the study was conducted, what it actually accomplished, and how it related to the proposed project.

4. The Related Work section includes at least eight relevant articles related to the proposed work.

5. The Related Work section situates the proposed project in the broader scope of existing work.

6. The section includes introductory and concluding remarks.

7. The section follows a logical flow.

8. There are no typographical or grammatical errors in the proposal draft.

9. There is no extraneous text.

Help?

Please let the instructor know of any questions that you may have. Please use email or make office-hour appointment slots if you would like to discuss an issue.