Due: 23\textsuperscript{rd} January

CMSC 580
Junior Seminar
Spring 2020

Assignment 2:
Topic Exploration For a Senior Thesis Proposal
Due by 9:30am on January 23\textsuperscript{rd}

Reading

To learn about research paper reading strategies, please read articles titled “How to Read a Paper” by S. Keshav and “How to Read a Computer Science Research Paper” by A. Stent.

Part 1: An Area of Interest

Last week, you all had a chance to think about and assess your interests in the areas of computer science and informatics. In these fields, it is typical for many ideas to be composed of ideas from many different directions. To investigate your areas of interest further, a dive into literature in that and related areas is necessary.

This week, you are invited to explore various sources of literature related to your broad area of interest and the keywords you will identify that affiliate with your interests. You are to answer (in writing) several leading questions which have been designed to help you to find out more about your specific area(s) of interest. To learn about what an area has to offer, and about the directions of its research, you will be reading through primary source articles from online repositories such as Google Scholar (https://scholar.google.com/). After you have found relevant articles and have spend some time to read through their abstracts and other material as necessary, please complete the questions at the Google form link above.

Be sure to think about what you love about an area that you like and why it excites you.

Writing Task

Go online to sites that offer articles to read from your interest area such as scholar.google.com to type a general keyword from your interest area. Look through the articles to get more ideas. These articles do not need to be all from computer science or informatics related areas. Remember that rich ideas come from a fruitful combination of ideas from various fields. Keep a note of these ideas for when you complete your leading questions in the Google Docs form (using the link provided above).

In the Google form (https://forms.gle/AqLd7FTQrzG8M75z5), you will be invited to answer the following questions.

1. What interest area did you explore this week?

2. What keywords did you use to find relevant articles?

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3. What kinds of *important articles* (based in academia or industry) did you find from this search to give you a better view of where you would like to start a project? Give a brief overview (2-5 sentences) of the nature of the articles. How did these articles help you conceptualize work being done in your area of interest.

4. Now, in more detail describe two of the most exciting works that you found in a few sentences. For each article state:
   - the goal and motivation of the work,
   - the research question(s) behind the work (what did they study, what problem did they seek to solve),
   - what they accomplished, and
   - what future directions of their work are possible.

Please include the article's references. Note, these references can be found by clicking on the “cite” link in Google Scholar.

In the next part, you will be introducing your narrowed-down interest(s) from your research to the class during a lightning-talk of three minutes.

**Part 2: Lightning Talk and Slides**

For Thursday’s class, prepare a three minute “lightning talk”, together with several accompanying slides (written in a software of your choice), in which you expand upon your narrowed-down area of interest. Remember, you do not need to know exactly what your research project will be but your talk should discuss your area of interest in a more focused way. I will be looking for a progression of a thought from last week to this week as this assignment is to help you narrow-down a larger idea to a smaller one.

**Presentation Task**

For your talk, please respond to the following questions. Remember you will have only three minutes in your talk and so you will have to be brief.

1. What *was originally* your interest area?
2. What did you learn about this interest area since last week?
3. What *is now* your interest area?
4. What types of articles did you find to help your narrow down your interest area?

**Help?**

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