BE THE EXPERT ON YOUR RESEARCH TOPIC

PART 1: CONDUCTING A LITERATURE SEARCH

DUE: JUNE 3, 2016 AT 11:59 PM

SUBMISSION ON BLACKBOARD

Turn in your Literature Search document (as either a Word or pdf file type) to your SURF GA via Blackboard. Use the file name structure **LastName_FirstName_LitSearch**. Prior to submitting your document, you will need to have **your mentor review your list of papers and texts** to see if you are missing any key references. (You will want to show your mentor your list of references at least a few days before the submission due date to give you time to incorporate their feedback!) Your SURF GA will be evaluating the overall quality and completeness of your literature search, and will provide feedback on Blackboard.

PURPOSE

Your research will be built from (or at least related to) other previous work. Having at least a high level understanding of the previous work is essential in understanding your current research. Being aware of all related research ensures that your project has not already been done before, and allows you to identify specific gaps in previous work that your project may aim to fill. By the end of the summer, YOU will be the expert on your research topic, and as the expert, other researchers will expect you to know what previous work has been done.

Conducting a thorough literature search is necessary before you can write your literature review. A literature search involves reading (selectively) each reference you find, and documenting the citation information for all that are relevant to your project. For each relevant reference (e.g. journal article, conference paper, text book), it is essential that you additionally document *what* was relevant about the reference, so that when you write your literature review next week, you won't have to read through the entire article again (if at all). By completion of the tasks specified below, you will have a good start on finding and documenting all previous work pertaining to your research project.

INSTRUCTIONS

Task 1: Find, Read, and Document your References

- **Find 10 (or more) references** (e.g. journal articles, conference papers, text books, etc.) that are related to your summer research project. You may use any tool of your choice (e.g. Web of Science, Google Scholar, Purdue Libraries, etc.). These articles may be related to your research in any of the following ways:
  - They may be previous studies that your project is built from (i.e. is a continuation of)
  - They may discuss concepts or methods that you will use (or need to understand) to complete your project
  - They may provide alternate solutions to the same problem that your research aims to solve

  If your faculty advisor and/or graduate mentor have already recommended some key articles for you to read, they should definitely be included as part of your 10 references. However, *you must find at least one article using a tool of your choice*.

- **"Read" each reference.** It is helpful to read the sections of a paper in the following order: Abstract, Conclusion, and Introduction, followed by Methods and/or Results/Discussion. Remember that you only need to know the aspects of the work that are related to your project. If it becomes clear that a reference is not relevant, stop reading it and move on to the next.
- **For <u>each</u> reference,** briefly **answer the following questions:** (Your responses should be typed, and saved as either a Word or pdf file using the file naming format as specified in the "Submission on Blackboard" section of this handout.)

    1. What is the full citation for the reference?

       Note: You may use the format of EndNote, or any professional journal or conference paper (i.e. look at the article's reference section and copy their format). Some examples are given below.

       Journal Article Citation Example:
       Armstrong, N., Aldrin, E., and Collins, M., "Title of the Article," *Title of the Journal*, Vol. 3, No. 11, 1969, pp. 109–130.

       Conference Paper Citation Example:
       Rogers, B., Hughes, K., Longuski, J., and Aldrin, B., "Title of the Paper," AIAA/AAS Astrodynamics Specialist Conference, Minneapolis, MN, Aug. 13–16, 2012.

    2. What tool did you use to find the reference? (If recommended by a mentor, write "Mentor Recommendation".)
    3. Briefly summarize what (specifically) is relevant about this article to your project?
    4. What are the main findings of the article?
    5. What are the limitations of the study presented in the article? (This is where you identify the "gaps" in the study. For example: What are the assumptions used? Are there any limitations to their results due to the method(s) used? Could these results have been found using a different method?)

<u>Tips and Other Info</u>

*If there are fewer than 10 articles that you think are key to your research (or if you simply aren't sure how to proceed), look at the references listed in the articles that you have already found. (This is a good method in general for conducting an exhaustive literature search to find all relevant work.)

*In addition to what is included in this assignment, you may also want to document the references you've found using either EndNote, your lab notebook, or another method recommended by your adviser.

*In general, a typical literature review will contain many more than 10 references. Finding references is an ongoing process, and as you continue to work on your research this summer, you will likely document more than 20 relevant references!

<u>Task 2: Mentor Check</u>

Have your graduate mentor or faculty adviser look at the references you've found to verify that you have not missed any key references for your project. (At least, not any that they are aware of.) **Include, as part of your literature search document, a summary of the feedback that your mentor gives you** (include it below your responses for Task 1 in a section titled "Mentor Check"). Be sure to include in Task 1 any references suggested by your mentors.