The University of Memphis
Computer Science
COMP 7/8150 FUNDAMENTALS OF DATA SCIENCE
TOPIC**: DOs and DONTs in project Proposal and Final Reports**

>> ABOUT THE PROPOSAL

Below are some elaborations to help you minimize the amount of effort in getting your proposal approved (and project done.) You can see a **concrete example** of how to put them in the file projPropSample.doc on Canvas. You are expected to follow that **template** for sectioning and content organization throughout, including your final report. The proposal is NOT the final report, but the start of it. A most common error is to confuse the two. The proposal is just **a good PLAN** as to **how** you will proceed to do the project (should be written in the future tense.) *Getting a proposal approved is the hardest assignment in this class, but once approved, the project should roll downhill from there.*

The final report is a brief and to-the-point description of what you actually achieved (should be written in the past tense, in 3 pages or less.) [more below]

Your proposal cannot be accepted unless the file is named projProp-XYn (n=version number) and the following questions are answered on it briefly and to the point IN ONE PAGE or less.

TARGET PROBLEM AND GOAL
*Overall, **WHAT**'s the target **data science problem** and what you do about it?*
In line with software engineering practices, a successful project requires setting a **very concrete and fixed target to achieve**. Shooting a moving target is much harder. Now, the target goal cannot be too easy or too hard, or too removed from the class contents that you could do it without exercising the critical concepts in the class. That's why your instructor will **help** in deciding and has to approve it before you set out to work on it. He will use it to ascertain how much you learned in the class. So **state a "data science problem" and WHAT you will do about it**. *You will not succeed unless you study, understand and follow Section GetAI11.4 well.*

This section must be approved before you proceed with the others because you will waste your efforts in writing them if we should have to change the problem or goal.

BACKGROUND/LIT REVIEW
*How** have other people solved this or similar problems? **How** will you proceed?*
Once the goal is set, the question is **HOW** to proceed to achieve it. Chances are that other people before you have tried to solve similar problems; reinventing the wheel is not an acceptable project. So the plan must also include a preliminary scratch of the surface as to what has been accomplished on this topic/goal. **Simply mention a couple of citations in a prelim reference list** (below, possibly including links and access date) that you think will indeed answer questions above.

CASE STUDY
What is the closest solution out there for my problem in the goal?
This is ONE selection from your LIT REV as to the closest or most helpful solution you have seen out there to the (or a similar) problem in your goal. Of course, it will be

preliminary in the proposal. It can be traded up for closer/more helpful solutions later while doing the project. The solution must be sitting out there and you **ONLY need to provide a citation where to get it and include a sentence as to why** it will help you to achieve your goal.

TAKE-HOME DELIVERABLE
*What will be the solution to the problem for **the class and the instructor to be convinced you nailed** the project? Who accomplished what?*
Things do not always go according to plan. A project that specifically lists what it is supposed to deliver (in the form of useful product, or app, or take home goodies) can be achieved much more effectively (with less effort) and it will be more useful to other people, including you. The promised deliverables MUST mention HOW MUST mention HOW you will assess the quality of your solution(s) that make sense in the background/context of the project, not just as possible solutions.

REFERENCES
Where did/will you find all the help?
Document your sources. You will need to cite them in the progress reports and the final reports. (Not mentioning sources implies you invented it all, possibly incurring in plagiarism if not so.)

>> ABOUT THE FINAL REPORTS

Reports for the class and/or the instructor are to be uploaded before the due date in the corresponding "Upload" on Canvas and include (files must be named as written):

1. A **PR-XY**.ppt**,** an oral presentation of a progress report in a videorecording (**up to 120 seconds in length**) to be made available to the entire class for peer review;
2. A **FinalPresent**.ppt, a videorecording of an oral talk (**up to 360 seconds in length**) by all involved, also to be made available to the entire class. (Canvas puts limitation on the size of the file, < 5Mb.)
3. A **FinalRep1-XY**.doc or docx to share your findings in the LIT REV and CASE STUDY, in under 2 standard pages (for the instructor's eyes only.)
4. A **FinalRep2-XY**.doc or docx extending both FinalRep1 to include also your your DELiverables, in under 3 standard pages (for the instructor's eyes only.)

The final reports are a brief and to-the-point **description of what you** (and all team members in a team project) **actually achieved.** It should be written in the past tense, in 3 pages or less total concerning the deliverables on the problem and goal of your project. Common errors are to change the template and failing to understand that it is *not* a matter of volume, but of effectiveness in **achieving your goal** (i.e. delivering quality solution(s) to your problem, as stated in the accepted proposal.) You need to keep the sectioning in the original proposal and just add more stuff to answer these questions.

The instructor will cross-check **what you delivered against what you promised** to achieve and act accordingly to assign a grade, not against other (usually incomparable) projects. The promised deliverables **MUST include an assessment of the technical quality of your solution**(s) in the societal/business context where your project is situated.