Spring 18: CSci 8002—Introduction to Research in Computer Science–II

Guidelines for Research Proposal

Due: Apr. 06 (beginning of class)

In this final (written) phase of the coursework for CSci 8001–8002, you will develop a research proposal based on your literature review and research questions.

The goal of the proposal is to equip you with a roadmap for your proposed research. Accordingly, it should (a) introduce the research topic and provide context and relevance for it, (b) discuss the current state of knowledge on the topic, (c) propose a set of relevant research questions, and (d) provide an in-depth discussion of proposed approaches. (Note, however, that you are not expected to actually conduct the proposed research as part of this course.)

Much of the proposal should “write itself” based on your earlier work, i.e., the literature review and research questions. However, you should not simply concatenate these into a single file. Instead, you should strive to make your final proposal a coherent and logically organized document by incorporating your earlier work suitably. In doing so, be sure to take into consideration any feedback that has been provided to you in earlier phases.

Here is a possible way to organize your proposal, with suggested page limits.

• **Introduction:** Provides background and motivation for the topic area, discusses the focus of the proposal, and outlines briefly the research questions to be addressed and the potential impact of the proposed work. [1–2 pages]

• **Current status of knowledge:** Discusses prior related work and helps provide context for the proposed work. Much of this will be based on your literature review (suitably condensed) and any additional work that you may have come across since then. [2–3 pages]

• **Proposed work:** Discusses 2 to 3 research questions, why they are important, how they possibly relate to each other, what challenges they pose, and, most importantly, a detailed discussion of your proposed approach to these questions. Again, some of this will be based on your research questions (suitably condensed). [3–4 pages]

• **Timeline:** Provides a realistic estimate of the time you expect to spend to complete the proposed work. For this, it’d be useful to divide the work you plan on each research question into subtasks and state how much time (e.g., weeks or months) you expect to spend on each subtask. [0.5 page]

• **Conclusion:** Reiterates important issues touched upon in the proposal and helps tie everything together. [0.5 page]

• **References:** Lists all references cited in the proposal [No page limit.]

**Deliverable:** Please submit a typed, stapled hardcopy of your proposal (1-inch margins, 11- or 12-point font, single-spaced, single-column). Include a separate cover page, with the title of your proposal, your name, student ID#, and advisor name (if known). Proofread your document.

**Page limit:** 7–10 pages, excluding the cover page and references.

Have fun!