CMSI 620T
DATABASE SYSTEMS GRADUATE TUTORIAL
Fall 2022

Assignment 1024   Research Paper Directed Draft 2

We have now taken two steps into a typical process for identifying potential areas of research: (1) the initial research survey introduced us to the field as well as some new ideas and terms, and (2) the first directed draft gave you an opportunity to look at specific work and brainstorm some potential follow-ups to that work. With this draft, let's try to converge on one idea and flesh it out.

Decision time: synthesize <u>one</u> potential research project and build your case for it

This draft seeks to synthesize the prior two deliverables to focus on one specific area, leading to a concrete project. Think of this as forming a funnel, starting out wide but ending up narrow: a well-defined, well-scoped potential research project in the database field. The funnel structure is in fact the general "shape" of most research papers (go on, check back and see).

Research survey v2: Still a survey, but now focused on a chosen area

Start your draft with a *Background* section that mimics the initial research survey, but has greater focus. Do the same things though—provide some introductory references, define relevant terms, and generally educate the reader about this area.

What's missing v2: Identify a gap or follow-up area among these works

Next, write up a *Motivation* section that highlights next steps for this body of work. This parallels what you did previously but should be more focused now, leading to something that is within your reach. Cite liberally in order to support your point. Lead the reader to agree that there is work that can be done which has not yet been addressed.

Brainstorm v2: More than a brainstorm

Finally, write a section called *Methods* which describes a project that can address this gap. Be specific, be focused, be concrete, with clear resource needs and deliverables. You are not expected to do this project in its entirety this semester, but ideally you can show a solid start to it. Maybe it's the beginning of your capstone or thesis—who knows?

Overall outline

You'll notice that we are now approaching the structure that you generally see in research:

- A *Background* section that introduces the area to the reader and establishes key ideas

- A *Motivation* section that uses this background to identify an interesting line of investigation

- A *Methods* section that then seeks to describe the investigation that the author will conduct

Note again the aforementioned funnel structure—these sections start broadly but get more and more focused until one reaches a very specific description of a very specific project.

The result is a rudimentary research proposal: a document describing something you'd like to do but which you haven't started doing yet. That's the essence of this directed draft. As before:

- Do cite and list references *according to an established style manual*—the class did better this go-round but some can improve even further

- Do use your own words nearly *all the time*—the only time a direct quote is valid is when the specific wording of the quote substantially contributes to what you want to convey

Submission

Please upload a PDF of this emerging proposal to the designated assignment on Brightspace.

Scoring

The three sections are roughly equally weighted—let's call them around 15 points each, with a flexible 5 points to cover different areas of emphasis.