Research Assignment
CSCI 330

You are to write a paper and give a short presentation on a topic related to computer science. Below are some suggested areas, but you may propose your own. The paper and presentation will be separately graded.

Possible Topics
An interesting programming language or environment
Voice recognition systems
Computer systems in criminology or homeland security
Robotic support for the disabled
Gender issues in computer science
Ubiquitous (or pervasive) computing
Programming patterns
Visualization of algorithms
Universal web accessibility
Collaboration support systems
Identity theft and security
Smart Phones and the Disabled

The Paper
You will write a technical paper of at least 5 pages, double spaced, Times (or Times Roman, Times New Roman) 12-point font, 1-inch margins. It will have a cover page (not counted as one of the five) containing a title, your name, the date, CSCI 330, and the semester (e.g. Spring 2020), centered on the page. Your paper should be **stapled** in the upper left corner.

You should have at least 5 technical references, at least 3 of which should be available from the ACM Digital Library (you can login to this – choose Millersville as your instutition and use your MU login credentials). You should use the ACM Bibliography format and in-text citations of the form [1], [2,3], and so forth.

Your paper should include details from the papers as well as an analysis and commentary on those papers. Part of your analysis could include a discussion of the social, legal, and ethical issues that your topic brings up. This should be done as a research paper with proper organization and transitions between topics, NOT as a series of sections with one section per paper. ("The first paper I read…" or "In the first paper…", etc. is NOT acceptable.)

If your topic is a programming language, or a group of programming languages, your paper should include a critical evaluation according to the language evaluation criteria we learned in Chapter 1.

You will be graded on the technical content of your paper as well as on its mechanical details (such as spelling, grammar, organization, use of appropriate headings, clarity, etc.). See the attached paper rubric for details.

The Presentation
Your presentation should be approximately 10 minutes in length - significantly short or long presentations will result in grade deductions. It should be appropriately supported by the use of presentation media (such as PowerPoint). Your presentation will be graded on its content and effectiveness, including presentation skills. ** The rubric for this will be posted soon. I am refining it for online delivery **

Deliverables and Timeline

- **(15 pts) April 17th: Proposal with Bibliography** - You must propose a topic and present a bibliography for your paper and presentation. Your proposal will be a one-paragraph abstract and your bibliography should be in ACM bibliographic format (https://www.acm.org/publications/authors/reference-formatting). Submit this to the D2L Paper Proposal and Bibliography assignment as a PDF.

- **(35 pts) Last Week of Class: Presentations**

- **(150 pts) May 1st: Paper.** Submit this to D2L as a PDF.

Writing Competency Rubric
Evaluation Criteria

Outcomes	Advanced 4	Proficient 3	Basic 2	Minimal 1	Not Evident/Deficient 0
1. Central or Controlling Idea Presents a clear and focused central idea (a.k.a. thesis) that moves beyond general themes, clichés, and common knowledge while corresponding to the requirements of the writing task.	Central idea is perceptive, demonstrable, and maintained throughout, revealing robust and nuanced understanding-- engaged thought in regard to the writing task.	Central idea is a clear, thoughtful, appropriate response to the writing task, demonstrating solid understanding.	Central idea is perfunctory: perhaps a general theme that shows some understanding but modest to little engagement with the task at hand.	Central idea is unclear or absent, perhaps not demonstrable, and perhaps not well-connected to the writing task. Reflects little understanding.	No evidence of a central idea.
2. Organization Purposefully advances the central idea by the selection and arrangement of ideas coupled with the skillful use of transitions to create document and paragraph level coherence.	Clear, coherent structure with evidence of deliberate, original planning for the assigned task. Consistent, effective transitions. No significant lapses in overall cohesion.	Evidence of thoughtful planning appropriate to the writing task; easy to follow with some effective transitions.	A mechanical organization. Lack of smooth transitions distract from a unified coherence.	The sequence of ideas is difficult to follow— apparently patterned on the writer's idiosyncratic thought processes--with few, if any, cues for comprehension.	No apparent organizational pattern.
3. Development Primary and secondary source materials are applied in a sound and credible way to extend support and explain presented ideas and/or arguments.	Key points are fully, specifically, and effectively supported with a variety of credible materials. Sources are well-chosen, well-contextualized, and mindfully synthesized for the writing task-- and correctly cited.	Main points are supported with appropriate material. Sources are reasonably framed, synthesized, and explicated; nearly all sources are cited.	Support is general with an adequate mix of materials. Resource materials are not fully explained and not carefully contextualized in relation to the central idea—limited synthesis. Some citations may require clarification.	Thin explanation. Little of the evidence and explanation used supports the central idea. Resource materials are neither contextualized nor explicated. Citation is problematic.	Supporting materials and/or citations are absent.
4. Mechanics Applies the spelling, grammar, usage, punctuation, documentation style, and disciplinary conventions appropriate for the particular task.	No distracting spelling, punctuation, or grammatical errors; quotations and/or secondary source materials are all correctly cited.	Few distracting spelling, punctuation, and/or grammatical errors; quotations and/or secondary source materials are correctly cited.	Some distracting spelling, punctuation, and/or grammatical errors; some quotations and/or secondary source materials are not correctly cited.	Significant and distracting spelling, punctuation, and/or grammatical errors; quotations and/or secondary source materials are incorrectly cited or lacking citations.	Consistent patterns of errors and evident failure to grasp rules of language and disciplinary conventions. No citations for quotations and/or secondary source materials.
5. Style The varied use of sentence structure and careful choice of language helps to emphasize key ideas and create an appropriate tone for the writing task.	Sentences are noticeably original, vivid, and well-constructed— effectively suited to the rhetorical context. Vocabulary is precise and thoughtfully chosen. A distinct author's voice is evident in the sentence formation and choice of words.	Language is clear, thoughtfully expressed, and appropriate for the task at hand. Meaning may be discerned with little effort.	Sentences are adequate for the writing assignment, but with little variation in construction. Language choices are sometimes inadvertent and inappropriate to the writing task--and may be confusing.	Sentence structure, word order, and word choice are confusing and consistently undercut the writing task and its rhetorical context.	Sentence structure includes significant errors and technical missteps that lead to confusion. Language choices and tone evoked are in conflict with the intended aim of the writing task.
6. Audience Awareness Demonstrates deliberate consideration of the readers' needs, provides sufficient information necessary for understanding, and creates a connection with readers through diction, development, and document design.	Pointedly, thought-fully engaging: speaks specifically and originally to readers' needs and concerns, given the situation. Document exhibits purposeful design elements—for example, graphs, typesetting, and headings— relevant for the particular audience.	Reveals awareness of a real audience and its distinctive needs, demonstrating reader accommodation in deliberate document development, design, and articulation.	Limited content development, design, and articulation--with little attention to connecting with readers.	Document speaks strictly from the writer's perspective, demonstrating little to no consideration for readers' existences.	No awareness of audience evident in rhetorical choices or significant and disabling disparity between audience invoked and rhetorical choices selected.

Developed by William Archibald, Caleb Corkery, Kerrie Farkas, Judith Halden-Sullivan, Kimberly McCollum-Clark & Tracey Weis 2013