This is the content guide for the Paper Critique report for CS 4920/5920 Spring 2018. This guide provides the sections to be included in the report and the instruction pointers for each section and supports the high-level pointers covered in Lecture 0 and Homework 0 of reading "How (and How Not) to Write a Good Systems Paper". When writing your report, organize the report with the sections below in the stated order, e.g., Abstract precedes the first section, Introduction is the first section, …, and the last section is the Conclusion. In general, include explanations in the report, be concrete (e.g., pointing to the specific parts of the research paper), and provide support when expressing your opinions.

For the report format, the paper critique report should be 2-3 pages in length in two-column IEEE Conference Proceedings format: https://www.ieee.org/conferences_events/conferences/publishing/templates.html Keep the spacing and the format as it is given from the template, e.g., do not modify the vertical/horizontal spacing or the column format. If your report exceeds 3 pages, e.g., a section becomes too long or there are many Optional Open Sections, have the content in the extra pages as well-marked appendices and make a reference to them from the main body.

Abstract
--- Present a summary of the report, including the paper's background and motivation, the authors' main contributions, and your analyses and critique on the paper
--- Be brief and limit this section to one or two paragraphs

Section 1. Introduction
--- Introduce the authors and the title of the work
--- Discuss the paper's background and the problem statement
--- Describe the motivation and the objectives of the paper
--- Discuss the paper's practical relevance to the real world

Section 2. Paper Contributions in the Author's View
--- Describe the author's (claimed) contributions and their focus
--- Explain the authors' treatment/discussions of the related literature
--- Explain how the authors support/validate their claims and the validation approaches, e.g., theory, simulation implementations, proof of concept, real-world implementations
--- Identify the author's methodologies used for validations, e.g., how the authors did: modeling, theoretical analyses and results derivation, system implementation, proof of concept, data collection, and/or data analyses

Section 3. Paper Analyses and Critique
--- Identify the strengths of the paper
--- Identify the weaknesses of the paper
--- Evaluate the paper's correctness (e.g., "is the paper technically sound and did the authors build a logical argument, or are there technical errors or unstated assumptions") and justify why you feel that it is correct or incorrect with concrete explanations and support (base your praises or criticisms based on the facts, claims, examples, and the validations provided by the authors)
--- If any, identify biases in interpretations on facts, figures, information, and logic, and other biases that the authors may have
--- Comment on whether the validation results accurately support the author's contributions and whether it is lacking support for some of the claims

Section 4. Suggestions for the Paper
--- Describe whether the author's ideas and visions agree with your experience and knowledge
--- Recommend improvements and revisions for the paper
--- Construct evaluation scenarios and metrics to further support the paper's hypotheses and contributions

Section 5. Future Work of the Paper
--- Identify research ideas that extend the paper but is out of scope (if the paper already includes a future work section, choose those that seem more promising or impactful and explain your choice)
--- Hypothesize the ideas and identify the corresponding potential contributions
--- Identify research ideas directions that are more remote to the paper's contribution/scope

Section 6. Optional Open Section
--- Name/title the section (so that it is descriptive of the section's purpose and content)
--- Include other content which you feel are relevant to the report
--- Alternatively, expand on any of the points in the previous sections with greater details (also indicate that you have done this in the previous section and make a reference to this section)

Section 7. Another Optional Open Section
--- You may have multiple Optional Open Sections

Second-to-Last Section. Ethics
--- Apply the DFEI ethics principles (listed and described in the Ethics lecture) – identify and apply at least four of the DFEI principles - to discuss the ethical issues and implications of the research paper

Last Section. Conclusion
--- Summarize the report
--- Highlight the key results of the paper and the main take-away's of the critique report
--- State what you believe is the ultimate success/failure of the paper