Thoughts on the term paper in CS6304 - Fall 2015

The term paper is expected to survey the CS literature on a topic involving static and/or dynamic program analysis, the focus of our seminar. The paper is expected to compare and contrast the individual research papers you are reading from your approved reading list. It is a survey in that you are reporting on research you have read about – not your own research contributions. The contribution of the term paper should be revealing the relationship between the work in the different papers you will read. Your term paper should demonstrate that you understand an area of CS, can deduce the main ideas from each research paper, can compare and contrast these papers and possibly group together papers related by their approaches or their common research questions investigated.

What is important in the paper is clarity of exposition and showing your understanding of what you have read. Being able to compare different approaches to the same research question(s) demonstrates your understanding. Being able to summarize tersely the main contributions of each paper likewise shows your ability to separate main results from details.

I suggest the following format for the paper, although I am open to other formats as well.
1. overview – what are the key themes in your reading list papers; what is the problem domain and its research questions; why is this research important?
2. Background definitions of concepts necessary to discuss the papers, if needed
3. Discussion of groups of related papers on your reading list
    a. What is the main contribution of each paper?
    b. What are the limitations of each approach?
    c. Do any of the papers build on each other's work?
    d. How are the papers in this group similar or different?
    e. What research questions are left unanswered by the papers in this group?

    Note: you may want to prepare this section by talking about each paper separately in a short section (no more than 1 page) and then having a combination section where you compare and contrast them – or you may take a different organization approach. Make sure you include your personal observations and any questions you have about the papers. When you compare your papers to each other, you should also compare them to papers we have read in the seminar.

4. Conclusions -- What did you learn? What are the large unanswered research questions left to solve? Is the area still active?

Most important is to convince me that you read and understood these papers and can compare them with each other and avoid superficiality. Please do not use a font smaller than 10pt; the paper length should not exceed 25-30 pages. My strong suggestion is to begin to list the similarities and differences as you read the papers. Write an outline for your term paper before starting to write it; this will help you in the long run.

If you have additional questions, please come see me.