Paper Summary Template

Robert Dick

Warning: Adjust the structure based on the paper!

Completing paper reviews has two purposes. First, you should learn about a broad range of research topics related to embedded systems. Second, you should learn how to do a literature survey when self-studying a new field. The process simulates what a Ph.D. student or other researcher might do when entering a new area.

Imagine that you will read 60 papers in a few weeks and then work on a research project for many months. During the project, you will forget some important ideas described in the papers that might be of use in your own work. You might also forget how specific papers are related to your idea. One solution would be to re-read all the papers. This is grossly inefficient. A better option is to take terse, insightful notes when reading the paper the first time. What was the main idea in the paper? What conclusions were difficult to figure out without a lot of thought? Where did the authors miss implications of their own work or experiments? In short, what useful, surprising things did you learn? Between half a page and one page is enough. If you are taking more space than that, drop the least important and surprising items.

For survey papers, the summary might be short and look a bit like the abstract. Outlining the work described, noting the main arguments, and indicating how well (and how) they are supported is sufficient. That will be enough to tell you whether you need to return to the survey during a later review.

For research and tools papers, the summary won't look like an abstract. I will present one possible outline below. You can start with that if you haven't done this before, but you should adjust the format depending on the paper contents. The main goal is for your summary to concisely indicate the most important ideas and findings in the work, perhaps with notes on implications or related new directions.

- Problem addressed

- Main solution idea(s)

- Connections with other important prior work

- Strength of supporting evidence

- Surprising findings

- Insights allowing you to understand derivations / proofs

- Important peculiarities in experimental setup and results

- Implications for other work

- New directions and ideas generated when reading the paper

- Unanswered questions