Network Theory and Applications: Project writeup guidelines

1 Abstract

The abstract is perhaps the most important component of any scientific write up. This is the concise overview that will decide whether or not someone is actually going to invest the time to read your paper. You must have a compelling, well-written abstract to entice the reader. What makes for a good abstract?

- 1-2 sentences explaining your problem and more so why it is an important problem.
- 2-3 sentences describing your technical approach and the results obtained.
- 1-2 sentences stating the conclusions and more so any important/intriguing *implications* of your work.

2 Introduction and Overview

Here you introduce and go into more depth about the problem.

Start out by again explaining what the problem statement is, and why it is important. Giving citations to past work helps to support these claims of importance. This explains your motivation for undertaking the study and why the reader should undertake reading your work.

Summarize your main contributions and the present an outline of the logical flow of the paper to come. (e.g. Sec II reviews the past work; Sec III contains the technical arguments; Sec IV has the implications for the field...)

3 Background

Review the past work in this area, and how your current work differs or addresses holes in that work.

4 Technical approach and results

The bulk of the paper. You probably need subsections. Very important that this is organized in a way that promotes the logical flow of the conclusions.

5 Discussion and Conclusions

This is often the most interesting part of a research paper! Start with a short 2-3 sentence summary of what you set out to study and what you achieved. Now the fun begins. Discuss treats to validity (i.e., acknowledge the shortcomings – let the referee know you are aware of the caveats and possible flaws). Discuss interesting next steps you would do now that you've learned the results discussed above (e.g., would you design the study differently? Look at different data?). Discuss the *implications!* (i.e., why is this work relevant and of importance to the field in general; do your results have potential to extend to other problem domains; etc.)

6 Bibliography