

# How to Write an Abstract

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An abstract is a self-contained, short, and powerful statement that describes a larger work.

## Checklist: Parts of an Abstract

Despite the fact that an abstract is quite brief, it must do almost as much work as a multi-page paper that follows it.

It should in most cases include few sections. Each section is typically a single sentence, although there is room for creativity. In particular, the parts may be merged or spread among a set of sentences. Use the following as a checklist for your next abstract:

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## **1) Motivation:**

*Why do we care* about the problem and the results? If the problem isn't obviously "interesting" it might be better to put motivation first; but if your work is incremental progress on a problem that is widely recognized as important, then it is probably better to put the problem statement first to indicate which piece of the larger problem you are breaking off to work on. This section should include the importance of your work, the difficulty of the area, and the impact it might have if successful.

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## **2) Problem statement:**

What *problem* are you trying to solve? What is the *scope* of your work (a generalized approach, or a specific region)? Be careful not to use too much jargon. In some cases it is appropriate to put the problem statement before the motivation.

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## **3) Approach:**

*How did you go about solving* or making progress on the problem? What data or databases did you use? What important *variables* did you use? Did you use simulation, models, GIS, or statistical analysis of field data for an actual final map?

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## **4) Results:**

*What's the answer?* Specifically, most good study cases conclude that something is so many percent faster, cheaper, smaller, or otherwise better than something else. Put the result there, in numbers. Avoid vague, hand-waving results such as "very", "small", or "significant." If you must be vague, you are only given license to do so when you can talk about orders-of-magnitude improvement. There is a tension here in that you should not provide numbers that can be easily misinterpreted, but on the other hand you don't have room for all the caveats.

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## **5) Conclusions:**

*What are the implications* of your answer? Is it going to change the world (unlikely), be a significant "win", be a nice hack, or simply serve as a road sign providing recommendations for the future. Are your results *general*, potentially generalizable, or specific to a particular case?

# Other Considerations

- An abstract must be a fully self-contained, capsule description of the paper.
- Meet the word count limitation.
- Think of a half-dozen search phrases and keywords that people looking for your work might use. Be sure that those exact phrases appear in your abstract