

PARTS OF A SCIENTIFIC PAPER



1 Abstract

Purpose: Quickly tell the reader what your paper is about and why it is important

Structure:

- Introduce the specific problem addressed
- Briefly explain the techniques used
- Share your key takeaways
 - What were the most interesting results?
 - How did you improve the field?
- Keep it short! (~250 words) They can read the paper for more information!



2 Introduction

Purpose: Familiarize the reader with the topic and what gap exists in the field

Structure:

- Explain the high level problem addressed
- Describe why current approaches aren't good enough
- Provide an overview of the paper's structure
- Imagine this is being read by an undergraduate in your field! Readers should be able to connect with the fundamental motivation, even if they may not understand the technique

3 Literature Review

Purpose: Provide a detailed analysis of similar work in the field and how your work is unique

Structure:

- Explain the technique of other works similar to yours
 - How have you built upon existing work?
 - Are there ways these other works are not sufficient for your application?
- You can group similar techniques or applications together in the same paragraph, the structure can be more freeform

4 Methods

Purpose: Explain how to produce your results

Structure:

- Optional: Preliminaries, which describes key notation used throughout the paper
- Explain the technique you have created or reference what existing techniques you relied on. Readers should be able to replicate your method from this description.
- Diagrams and pseudo code are very useful to explain how different parts of your model/experimental setup interact with one another

5 Results

Purpose: Demonstrate your results and why they are significant for your field

Structure:

- Explain each result you have, and how to interpret the associated tables or figures.
- For each result, explain its key implications.
- Make sure that your figures and tables are clearly labeled and easy to understand!

6 Conclusion

Purpose: Summarize the methodology you used to generate results and your key findings

Structure:

- Provide a brief summary of your methods section, what you evaluated in your results section, and your key takeaways from these results
- Mention areas of future work; these can be limitations of your current work or it can be work you're pursuing next

Questions? Feel free to book an appointment



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