PARTS OF A SCIENTIFIC PAPER



Abstract

<u>Purpose</u>: 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 morè information!



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

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 vours
 - 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

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

Results

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

Structure:

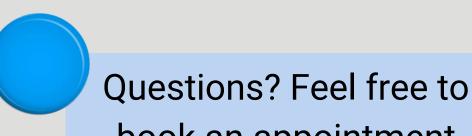
- Explain each result you have, and how to interpret the associated tables or figures.
- For each result, explain its key implications.
- Make sure that your figures and tables are clearly labeled and easy to understand!

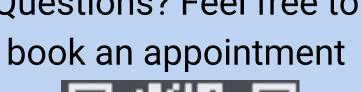
Conclusion

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







with the CommLab

