

Academic Skills [2]

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Academic Writing

A Graduate Student needs to write...

Academic Papers: Short, Long, Survey Paper, Abstract Paper,...

Presentations: poster, talk slides, ...

Other scenarios

Academic emails

Student proposals

Academic Papers

Abstract

Introduction

Related Works

Methodology

Experiments

Abstract: overview of the work

What should be included:

The task you are working on;

Existing approach and their drawbacks;

How do you improve for this task; 1-2 sentences overview on the method/benchmark you propose.

Summarize methodological and experimental contribution.

Examples: [link](#), [link](#), [link](#)

Introduction: Paper Overview



Long paper vs short paper

In long papers, usually there is a figure or example;

What should be included:

Task and difficulty; (figure/example) conjunction words

Existing works and drawbacks;

What's new about this work; **this is the most important part!**

Summarize contributions;

Example: [link](#)

Related Work

Usually combined with Introduction for short papers;

Sometimes it is written after the Introduction OR before Conclusion;

What should be included:

- What you compare as the baselines, better to mention them.

- Drawbacks and how your work is different.

Methodology: main idea

You should start when your idea is concrete.

Two important parts: figure and equation.

Figure: clean and pretty

Equation: clean and pretty, again

First draft is always rubbish... hard to read, and errors;

Revise, revise and revise.

Example: [link](#)

Experiments

Introduce baselines and benchmarks;

Include **hyperparameters** (could move to appendix);

Main experiment results:

- Table of content;

- Description: which performs better, and **takeaways!**

 - Why your method is better than others, what is the reason or intuition?

 - How the novel method is contributing to the final results.

Ablation and Case Study

Depending on the task, include tables, figures. Also description and takeaways are needed.

Sometimes human evaluation should be included too.

Case study:

- Visualization and other figures;

- Quantitative or/and qualitative.