

# How To Write Scientific Stuff

# Standard Paper Template

1. Abstract
2. Introduction
3. Related Work
4. Methods
5. Results
6. Conclusion
7. Future Work
8. Limitations
9. (References)

# Writing Process

1. Methods
2. Results
3. Related Work
  
4. Introduction
5. Conclusion
6. Future Work
7. Limitations
  
8. Abstract



Bullet Points First!

# Abstract

## Dos

- Give Context
- Provide a rough overview over Paper
- Already mention results, e.g. if new SOTA achieved

## Don'ts

- Explain methods
- Reference other work
- Give a summary of how your approach works

# Introduction

- Motivation and Context
- High-level summary of your work:
  - more detailed than in abstract
  - not in-depth
- End with clear list of contributions
- Create Overview Figure

# Related Work

- Show works that deal with similar problems
- Not every work that is relevant in your work, e.g. metrics that were used
- Do not explain in detail, focus on
  - Contribution
  - Architecture
  - Limitations
- Limitations have to be clear — to motivate that your work matters

# Methods & Results

# Conclusion (& Future Work)

*Repetition is the name of the game!*



# Limitations

- Data (training and testing)
  - Quality issues
  - Assumptions
  - Bias
- Model limitations
  - w.r.t unbalanced datasets (Long tail distributions)
  - Complexity
- Required resources (e.g. large GPU resources)
- Scalability

# Writing

Common pitfalls:

- Overly long sentences
- Commas
- British vs American English
- Tenses

Use spell checking and grammar tools!

# Figures and Tables

- **Figures**
  - Descriptive Captions (not only in text)
  - Do not reuse figures from other papers!
- **Tables**
  - Use `booktabs` package
- **Reference all figures and tables in text**
- **Use `\autoref` (from `hyperref` package)**

# Citations and Bibliography

Mostly automated via bibtex and `\citet` and `\citep` command

- `\citep` - uses parentheses, e.g. *(Jones et al., 1990)*
- `\citet` - just text, e.g. *Jones et al. (1990)*

Where to get entries?

- Google Scholar
- DBLP (<https://dblp.org/>)
- Publisher websites

Try not to cite preprints!

Proofread at least once before submitting!

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# Take a Step Back

- Try to imagine what is missing in your explanation
- Easier if you have someone to review your work
- Common examples:
  - Assuming that techniques do not have to be explained because they are known
  - Showing only extraordinary examples and forgetting standard use case

# Formalities

- Use the provided template
- Write 12-18 pages excluding references
- Submit by February 28 (This may be extended by one week at request)
- Remember to also polish your code!
- Evaluate us on EvaP!