

# How to write a research paper?

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# You don't have to write a research paper!

- Blog-post
- Video (3blue1brown style or using PPTs)
- Keep the research proprietary and go towards the entrepreneur route

## What to think about?

- Understand the uniqueness of the problem you have tackled
- What kind of analysis are you willing to perform? (Blog-posts - less thorough)
- Time constraints
- Monetization aspect

# Remember!

- At the end of the day, irrespective of the medium, you want to present your findings.
- Understanding how much time you can give to this can prevent exhaustion.
- It took us nearly 2 months with many breaks in between.

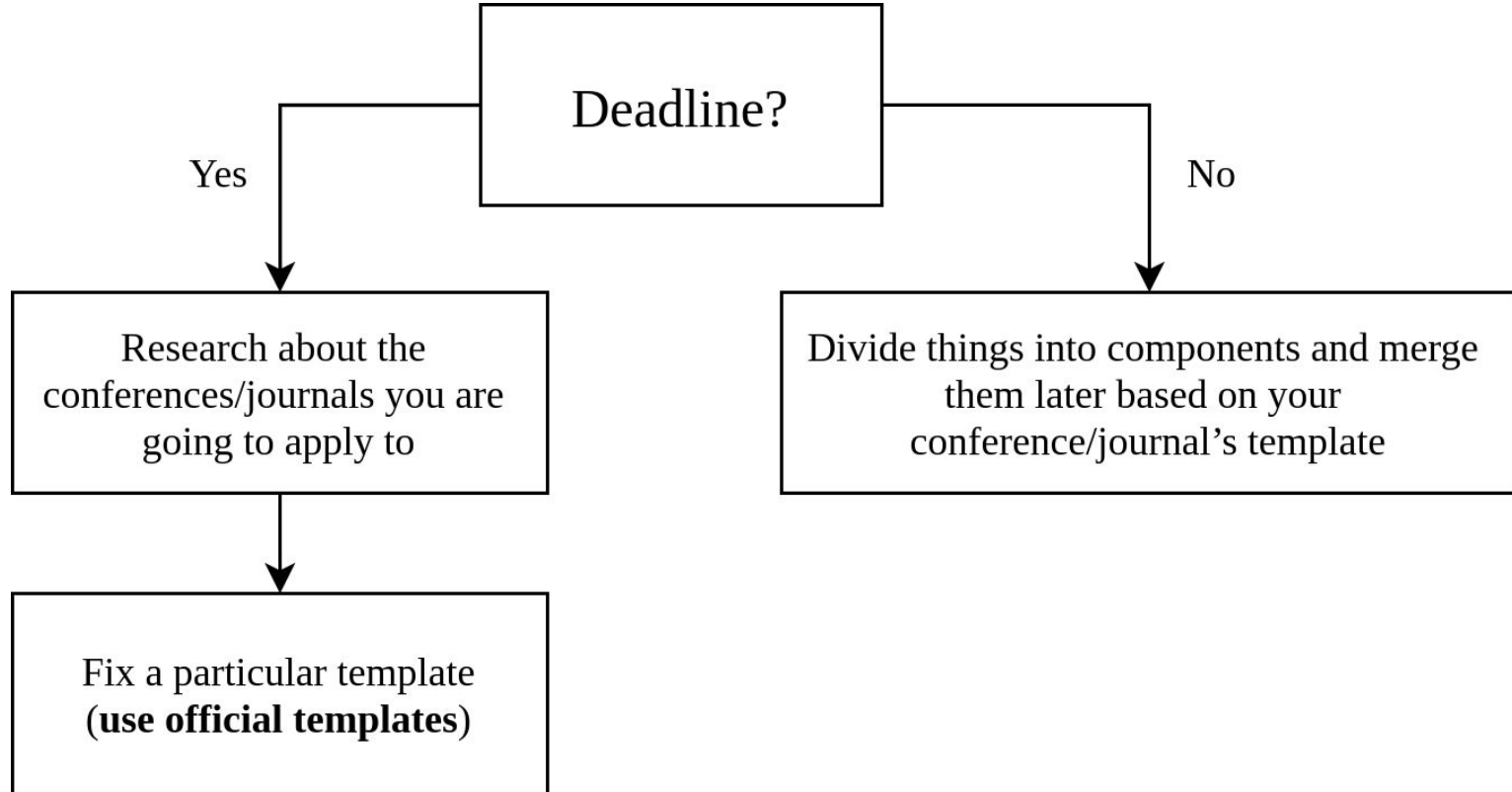
Starting Comments  
And  
Initial Research

# Before we start .....

- You want to be surrounded by **critiques**
- Lot of critical reasoning takes place
- Encourage your co-authors to be incredibly vocal regarding every sentence in the paper ✓
- We spend 2 weeks writing; ~6 weeks critiquing and tuning

*Quality of your research paper is directly proportional to <sup>(1)</sup>quality of your research and <sup>(2)</sup>ability to successfully communicate your research in paper*

# Research about conferences/journals (1)



# Research about conferences/journals (2)

- Field study - If you have fixed your conference/journal (or a small subset), read some of the papers related to your subdomain accepted by them.
  - Understand the flow of the papers and how they presented their important points

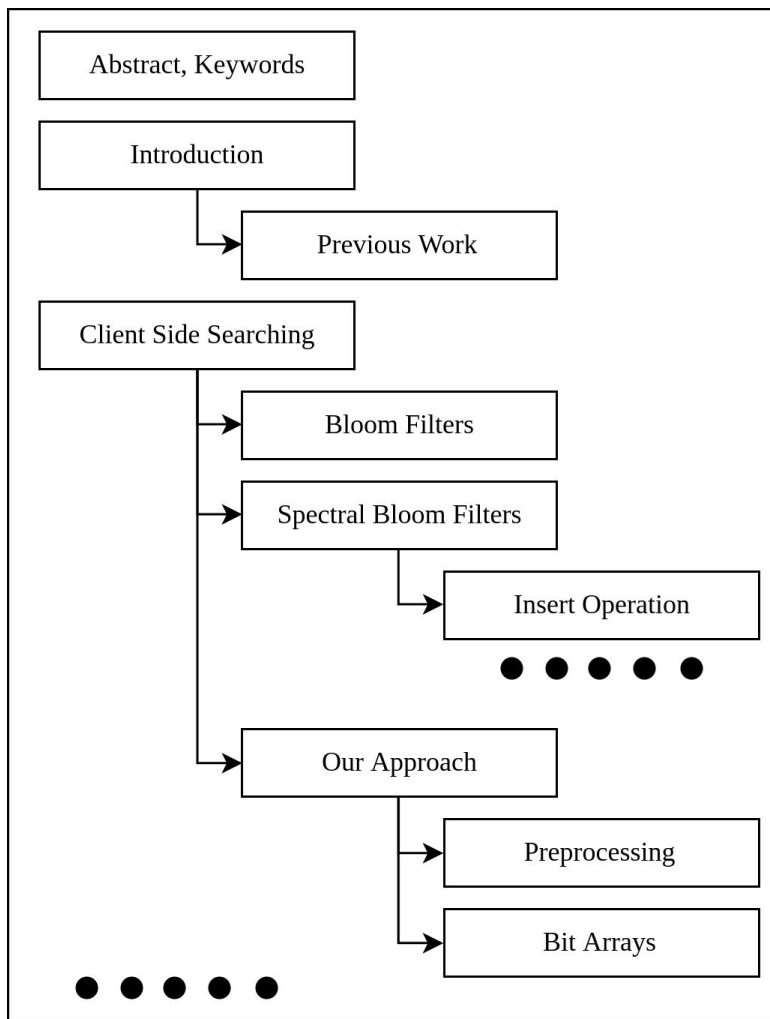
How should you start writing your  
paper?



# First Draft (1)

- Start with a rough draft
- Remember - this is your first draft - do not spend time editing
  - Write down all your thoughts, refining comes later
- Foundation - Lay down the headings, subheadings, sub-subheadings of your paper

# Foundation in our paper



# First Draft (2)

- Never touch the introduction, abstract, or conclusion part first
- First - collect all your results (charts, tables, diagrams, etc.)
- After that - start writing the *experiment* section (relatively easy)
  - Followed by the *results* section
- Then link *experiment* with *results* section (labelling)

# First Draft (3)

- After experiment and results section, we went with *conclusion*, *abstract*, and *introduction* (in this order)
- Writing introduction last → link it with various sections of the paper
  - Also, you have a good picture of the *previous work* by then

# First Draft (4)

Throughout our first draft, we:

- Inserted *{cite}*, and came back later to replace them with actual citations
  - Saves time
  - Similar for references - *{figure}* and *{table}*
- Maintained a *.txt* file for our citations
  - *.xls* file or some dedicated tools would be better

Refining

# Iteration

- Read it, re-read it, highlight all the changes you want to make
- Don't just state why? Write the revised changes right then!
  - Usually when we are proofreading - we are in *the zone* - restructuring is easier at that time ✓
  - Else, re-understanding the why? before reformulating the changes ✗
- Discuss all the revised changes with your co-authors
- Request colleagues to read your draft and suggest changes
  - Outside perspective is important

# Final Remarks



# Some pointers

- Keep terminology uniform throughout the paper
- Language should be simple, less wordy, and formal
- Remember - Your results should be reproducible
- Be particular about references to prevent accidental plagiarism
- Can use Kanban style technique to manage issues in paper
- Keep a local backup
- Create paper sketches for diagrams before using software
- We heavily used Overleaf (LaTeX), Draw.io, Grammarly, and Google Docs
  - Figures in Python - Matplotlib

No one will ever read your  
paper in entirety, so write  
for the skimmers.

- Patrick Winston

End