How to Write Research Papers

By

Dr. Prashant Singh Rana

Computer Science & Engineering Department,

Thapar Institute of Engineering and Technology,

Patiala, Punjab.

www.psrana.com | psrana@gmail.com

Paper Writing

Research paper format

1	**Title**	Description of your research work	1-2 lines (20 words)
2	**Abstract**	Brief Description of you Work, motivation, novelty, methodology	10-15 lines (200 words)
3	**Keywords**	Keywords describe domain and methodology	5-6 words
4	**Introduction**	Description of the problem, related work, literature survey and paper organization	1½ to 2 page
5	**Materials and Methods**	Description of the Dataset and methods used	1½ to 2 page
6	**Proposed Methodology**	Description of the proposed methods	1 to 1½ page
7	**Results and Discussion**	Comparison of the results and discussion on it.	1½ to 2 page
8	**Conclusion**	Conclusion of the complete work and future directions	10-15 lines (200 words)
9	**References**	List of papers that are referred	10-20 papers

1. Title

It should be self-explanatory, clear and short.

Example:

1. Automated Audio Genre Classification using Ensembled Techniques

2. Quality assessment of modeled protein structure using physicochemical properties

3. Multilevel ensemble model for prediction of IgA and IgG antibodies

4. Fraudulent Firm Classification: A Case Study of an External Audit

5. Ensemble Technique for Prediction of T-cell *Mycobacterium tuberculosis* Epitopes

6. **Tox2020:** Toxicity Prediction of pre clinical trial drug using Physicochemical Properties and Machine Learning Approaches

7. **SmartGlucoBinder:** Design and Synthesis of Small Glucose Binder Molecule using Computational Intelligence Approach

Authors Names

Incorrect Example:

Mr Harish Sharma **(BE 3rd Year Student)** and **Dr.** Prashant Singh Rana
(Assistant Professor)
WZ-192, Uttam Nagar, New Delhi, India

Mr Harish Sharma **(Student)** and **Prof** Prashant Singh Rana
Computer Science and Engineering Department, Thapar University, Patiala, India
My Email **is**: Hsharma@gmailcom

Tips:

- **Avoid Mr, Ms, Mrs, Dr., Prof., position name with name**

- Use college or company as affiliation

- Always use email.

Authors Names

Format:

> **<< Title >>**
>
> **<< Author1, Author2, Author3 and Author4 >>**
>
> << Affiliation >>
>
> << Email1, Email2 >>

Correct Example:

> **Automated Audio Genre Classification using Ensembled Techniques**
>
> **Nishtha Hooda, Seema Bawa, and Prashant Singh Rana**
>
> Computer Science and Engineering Department, Thapar University, Patiala, India
>
> Email: psrana@gmail.com

> **Fraudulent Firm Classification: A Case Study of an External Audit**
>
> **Harish Sharma[1] and Prashant Singh Rana[2]**
>
> [1]Computer Science and Engineering Department, RTU, Kota, Rajasthan, India
>
> [2]Computer Science and Engineering Department, Thapar University, Patiala, India
>
> Email: hsharma@rtu.ac.in; psrana@gmail.com

2. Keywords

Paper Title: Automated Audio Genre Classification using Ensembled Techniques

Keywords: Audio Signals, Machine learning, Music Genre, Classification, Music Information Retrieval, Topsis

Explore Papers

Go to **psrana.com** → **6. Sample Research Papers**

- **01 - Automated Audio Genre Classification using Ensembled Techniques**
- **02 - Quality assessment of modeled protein structure using physicochemical properties**
- **03 - Multilevel ensemble model for prediction of IgA and IgG antibodies**
- **04 - Fraudulent Firm Classification A Case Study of an External Audit**
- **05 - Ensemble Technique for Prediction of T-cell Mycobacterium**
- **06 - Classification of drug molecules for oxidativestress signalling pathway**

Do's and Don't

Research Paper

Research Paper must be well written.

Don't   Do

- Which is smarter? Which will get the job?

Research Paper

Do

- I wrote a program
- It reads the data
- It puts the data points into space
- It uses examples to build a hyper-plane It assigns labels to the data, + and -

Don't

- I used supervised learning
- I used SVM classifier

Research Paper

Do

- Given our considerations laid out in the current section, one can easily conclude that in fact the variable a can be regarded to be equal to variable b

Don't

- Thus, $a = b$

Good vs Bad Proposal

- **Good Proposal**
  - solid,
  - easy to follow
  - good state of the art overview
  - detailed report of experiments
- **Bad Proposal**
  - bad English
  - inconclusive
  - hard to follow, important details omitted

Where to submit the Paper

1. **Journals**
   - **Springer**
   - **IEEE**
   - **Tayler & Francis**
   - **Elsevier**

2. **Conference**
   - **CVPR**
   - **ICML**

Comparison b/w Journals and Conferences

	Journals	Conference
Acceptance Duration	2 to 12 months	2 to 4 months
Fee	Free, Paid	Paid (5k to 30k)
Number of Pages	8 to 100 pages	8 to 15 pages

Explore CVPR and ICML

Google it

- **CVPR 2023**

- **ICML 2023**

Conference Info

- **Google it "Conference Alert"**
- **psrana.com → Join "RanaResearchGroup"**

Conference Ranking

- **Google it "Best Computer Science Conferences Ranking"**

Tips and Tricks

1. **Add maths as much as possible**

2. **Add Graphs and Tables**

3. **Add discussion and analysis part**

4. **Use ChatGPT for**
    - **Introduction**
    - **Literature Review**
    - **Discussion section**
    - **Minimize the Plag (Re-write the text)**

Thanks

Q & A

Learning by Doing

Contact

www.psrana.com | psrana@gmail.com