**What Research is -**

Research is a way of looking for new information, new understanding, and new facts.

Research is a systematic inquiry to describe, explain, predict, and control the observed phenomenon.

**What are different types of research papers –**

**Analytical Research Paper**

In an analytical research paper you pose a question and then collect relevant data from other researchers to analyze their different viewpoints.

## Argumentative (Persuasive) Research Paper

The argumentative paper presents two sides of a controversial issue in one paper. It is aimed at getting the reader on the side of your point of view.

## Definition Paper

The definition paper solely describes facts or objective arguments without using any personal emotion or opinion of the author. Its only purpose is to provide information.

## Compare and Contrast Paper

Compare and contrast papers are used to analyze the difference between two viewpoints, authors, subjects or stories.

## Cause and Effect Paper

Cause and effect papers are usually the first types of research papers that high school and college students are confronted with.

## Interpretative Paper

An interpretative paper requires you to use knowledge that you have gained from a particular case study, for example a legal situation in law studies.

## Experimental Research Paper

This type of research paper basically describes a particular experiment in detail. It is common in fields like biology, chemistry or physics.

## Survey Research Paper

This research paper demands the conduction of a survey that includes asking questions to respondents.

**Where are research papers published and what is the process?**

There are plenty of conferences and journals that accept papers in machine learning. I'll list some of the top ones:

1. International Conference on Machine Learning (ICML)
2. International Conference on Pattern Recognition (ICPR)
3. Int. Conf. on Computer Vision and Pattern Recognition (CVPR)
4. Neural Information Processing Systems (NIPS)
5. Int. Con. on Artificial Neural Networks (ICANN)
6. Journal of Machine Learning Research
7. Computational Learning Theory (COLT)

Major steps involved in publishing a research paper from the manuscript preparation to publication are as follows-

**Perform Research Work** Have original research work of current interest

**Prepare Manuscript**

Identify a journal with aims & scope close to your research work. This is the time when the author requires to find all detail and policy of the journal including copyright, authorship, submission policy, and publication charges.

After finding a suitable journal, format manuscript according to the author guideline of the targeted journal

**Submit Manuscript**

Submit your manuscript online through the targetted journal’s homepage and add complete detail in the online submission system. Do not submit the manuscript to more than one journal at the same time

**Peer-review**

After the editorial screening, the peer-reviewing process will get initiated for a well-formatted manuscript within the scope of the journal.

**Decision**

Based on the reviewer’s recommendation, the editor will send you one of the following decision letters-

***Revision Required***

***Decline***

***Accepted***

**Publication**

Few days after acceptance of the manuscript you will receive a galley proof version for minor proofreading corrections and your paper will be published.

**How do you evaluate a journal / conference /magazine?**

To evaluate a journal article look for:

* Purpose of Article: Why was the article written? To:
  + persuade the reader to do something?
    - For example: vote a certain way, purchase an item, attend an event
  + inform the reader?
    - For example: results of a study/experiment, what happened at an event
  + prove something?
    - For example: that a behavior is bad/good, a method works/doesn't work

Type of Journal: For college-level term papers, information should be obtained mostly from scholarly journals. Scholarly Journals contain articles describing high quality research that has been reviewed by experts in the field prior to publication.

Organization and Content: Is the material organized and focused? Is the argument or presentation understandable? Is this original research, a review of previous research, or an informative piece?

Date of Article: Some topics, such as those in the health sciences, require current information. Other subjects, such as geology, value older material as well as current. Know the time needs of your topic and examine the timeliness of the article; is it:

* up-to-date,
* out-of-date, or
* timeless?

Bibliography: Scholarly works always contain a bibliography of the resources that were consulted. The references in this list should be in sufficient quantity and be appropriate for the content. Look for:

* if a bibliography exists,
* if the bibliography is short or long,
* if the bibliography is selective or comprehensive,
* if the references are primary sources (ex. journal articles) or only secondary sources (ex. encyclopedias),
* if the references are contemporary to the article or much older, and
* if the citation style is clear and consistent.

Usefulness: Is the article relevant to the current research project? A well-researched, well-written, etc. article is not going to be helpful if it does not address the topic at hand. Ask, "is this article useful to *me*?" If it is a useful article, does it:

* support an argument
* refute an argument
* give examples (survey results, primary research findings, case studies, incidents)
* provide "wrong" information that can be challenged or disagreed with productively

 Coverage: Does the article cover the topic comprehensively, partially, or is it an overview?

BIBLIOGRAPHY –

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