



Title: It Should Accurately Describe the Content in Fewest Possible Words

First Author¹, Second Author²

Abstract

The abstract is a paper summary. It is typically one paragraph long and is a concise summary of what was done and the principal results. It may be assumed that the reader has some knowledge of the subject, but the abstract should be intelligible without reference to the paper. Don't cite sections, tables, or figures in the abstract. The paper's title is part of the abstract, so the opening sentence should be framed without repetition of the title. Write the abstract after you have written the rest of the paper; then, you know what the paper claims to do and does. A well-prepared abstract enables the reader to identify the basic content of a document quickly and accurately, to determine its relevance to their interests, and thus to decide whether to read the document in its entirety. The Abstract should be informative and completely self-explanatory, provide a clear statement of the problem and the proposed approach or solution, and point out major findings and conclusions. The Abstract should be 100 to 200 words in length. The abstract should be written in the past tense. Standard nomenclature should be used, and abbreviations should be avoided. No literature should be cited. The keyword list provides the opportunity to add keywords used by the indexing and abstracting services and those already present in the title. Judicious use of keywords may increase the ease with which interested parties can locate our article (9 pt.).

Keywords:

First keyword, Second keyword, Third keyword, Fourth keyword, Fifth keyword

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1. Introduction

The paper can be written in American or British English but not mixed up between both languages. The terms in foreign languages are written italic. The text should be divided into sections, each with a separate heading and numbered consecutively. The section/subsection headings should be typed on a separate line. Authors are suggested to present their articles in the section structure: **Introduction – Proposed Research Method/Algorithm - Results and Discussion – Conclusion.**

This section introduces the topic of your paper to the reader. It usually includes a historical overview with references to previous work. The introduction might include any theoretical calculations or results that you will need later in the paper, although many times, detailed theoretical calculations are included in a separate theory section or an appendix. However, the most important purpose of the introduction is to describe the objectives of your experiment.

The Introduction should provide a clear background, a clear statement of the problem, the relevant literature on the subject, the proposed approach or solution, and the new value of research which is innovation. It should be understandable to colleagues from a broad range of scientific disciplines. The introduction serves the purpose of leading the reader from a general subject area to a particular field of research.

2. Related Works

The Related works should pick and choose the most important papers and only talk about them. This method allows the author to give about a paragraph or so of space for each paper and give details about what the paper is about. A space paragraph is adequate to explain the contributions of the work and how it relates to your work.

The related work section may also be called a literature review. The point of the section is to highlight work done by others that somehow ties in with your work. It may be work that you're basing your work on or work that shows others' attempts to solve the same problem.

There are a couple of schools of thought when writing the related work section. The first school of thought is to mention absolutely everyone and every paper that may be even remotely related to the topic at hand. It is not like this method as it usually ends up being a long section with at most one sentence on each paper since there's no room to give any actual amount of detail. It is also one of the reasons you may find a 4-page paper with two or three pages of writing and 1 page of references.

3. Proposed Method

The methods section of a research proposal contains details about how you will conduct your research. It includes your study design - the methodology and methods that you plan to use - as well as your work plan - the activities that you plan to undertake to complete your project.

The methods section of a research proposal must contain all the necessary information that will facilitate another researcher to replicate your research. The purpose of writing this section is to convince the funding agency that the methods you plan to use are sound and this is the most suitable approach to address the problem you have chosen.

Using *Word*, use either the Microsoft Equation Editor or the *MathType* add-on (<http://www.mathtype.com>) for equations in your paper (Insert | Object | Create New | Microsoft Equation *or* MathType Equation). "Float over text" should *not* be selected. Number equations consecutively with equation numbers in parentheses flush with the right margin, as in (1). First, use the equation editor to create the equation. Then select the "Equation" markup style. Press the tab key and write the equation number in parentheses. To make your equations more compact, you may use the solidus (/), the exp function, or appropriate exponents.

LSTM is an advancement of the Recurrent Neural Network (RNN) algorithm designed to address the challenges RNN faces in handling long-term data [17]. The LSTM model operates based on the following key components and formulas:

1. **Forget Gate:** Determines which information from the previous state should be forgotten. Table 1 summarizes the mathematical of **forget gate** in LSTM.

$$f_t = \sigma(W_f \cdot [h_{t-1}, x_t] + b_f) \quad (1)$$

Table 1. The Mathematical Notation of Forget Gate

Notation	Description
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f_i	<i>forget gate output</i>
σ	<i>Sigmoid activation function</i>
W_f	<i>Weights for the forget gate</i>
h_{t-1}	<i>Previous hidden state</i>
x_t	<i>input at the current timestep</i>
b_f	<i>Bias for the forget gate</i>

2. **Input Gate:** Decides which new information to store in the cell state.

$$\begin{aligned}
 i_t &= \sigma(W_i \cdot [h_{t-1}, x_t] + b_i) \\
 \sim C_t &= \tanh(W_c \cdot [h_{t-1}, x_t] + b_c) \\
 C_t &= f_t \cdot C_{t-1} + i_t \cdot \sim C_t
 \end{aligned}
 \tag{2}$$

Table 2. The Mathematical Notation of Input Gate

Notation	Description
i_t	<i>input gate output</i>
$\sim C_t$	<i>Candidate cell state</i>
C_t	<i>Update cell state</i>
W_i, W_c	<i>Weights for input gate and candidate state</i>
b_i, b_c	<i>Bias terms</i>

Be sure that the symbols in your equation have been defined before the equation appears or immediately following. Italicize symbols (T might refer to temperature, but T is the unit tesla). Refer to “(1),” not “Eq. (1)” or “equation (1),” except at the beginning of a sentence.

4. Experimental Setup

Experimental Setup In this section, you describe how the experiment was done and summarize the data taken. One typically describes the instruments and detectors used in this section. Describe the procedure followed to collect the data. If the experiment is complex, the procedure might be described in a separate section.

- 1) **Data Collection** This is where you include the date you took the data. Put the data in tabular form if appropriate. This section and the Experimental Setup sections can be combined for short papers.
- 2) **Data Analysis** In this section, you use the theory developed in the introduction to analyze the data.

Large figures and tables may span both columns. Place figure captions below the figures; place table titles above the tables. If your figure has two parts, include the labels “(a)” and “(b)” as part of the artwork. Please verify that the figures and tables you mention in the text exist. Use the abbreviation “Fig.” even at the beginning of a sentence. Do not abbreviate “Table.” Tables are numbered with Roman numerals. You can use color figures unless it is necessary for the proper interpretation of your figures. Figure axis labels are often confusing. Use words rather than symbols.

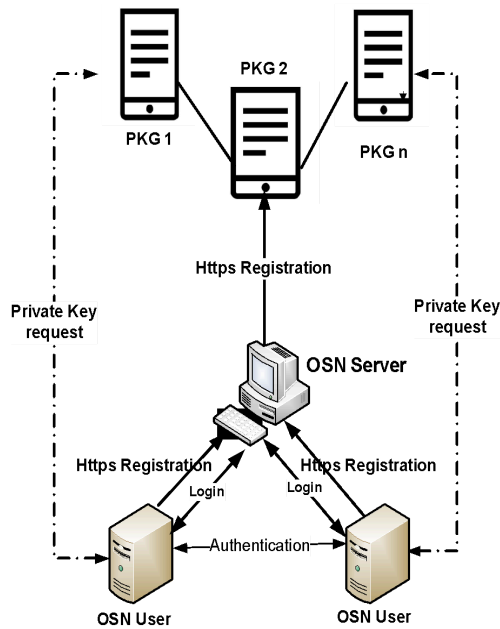


Fig. 1. Name of figure

Format and save your graphic images using a suitable graphics processing program that will allow you to create the images as PostScript (PS), Encapsulated PostScript (EPS), or Tagged Image File Format (TIFF), size them, and adjust the resolution settings.

Table 1. Name of table

No	Name	Description

5. Result and Analysis

This section is the real meat of the paper. In this section, you should interpret your results in light of the theory and other information in the Introduction section. This is where you would compare your result with theory or other observations. Describe how the result fits or doesn't fit current models. The results section should aim to narrate the findings without trying to interpret or evaluate them and provide a direction to the discussion section of the research paper. The results are reported and reveal the analysis. The analysis section is where the writer describes what was done with the data found.

The Results section of a scientific research paper represents the core findings of a study derived from the methods applied to gather and analyze information. It presents these findings logically without bias or interpretation from the author, setting up the reader for later interpretation and evaluation in the Discussion section. A major purpose of the Results section is to break down the data into sentences that show its significance to the research question(s).

The Results section should include the findings of your study and ONLY the findings of

your study. The findings include: Data presented in tables, charts, graphs, and other figures (may be placed into the text or on separate pages at the end of the manuscript).

6. Conclusion

No new information is presented here. Briefly summarize your main results and draw conclusions from them. Do your results confirm or deny current models or theories? If appropriate, suggest observations that might resolve issues your observations couldn't resolve. Often the abstract and conclusion are the only part of the paper that a casual reader will read. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

The conclusion of a research paper is where you wrap up your ideas and leave the reader with a strong final impression. It has several key goals: Restate the problem statement addressed in the paper. Summarize your overall arguments or findings.

You can add a future work section as an important part of a scientific article. The authors discuss extending your current works, approaches, or evaluations in the future work section. These future works often contain valuable information and give the researchers hints of new research directions or ideas.

Acknowledgment

Acknowledgement relates to the part of the research project where the author shows gratitude to the people or agencies who contributed to the research project. Acknowledgments enable you to thank all those who have helped in carrying out the research

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