Project Report: The Structure

Author1 (m20200000@novaims.unl.pt), Author2 (m20200001@novaims.unl.pt), Author3 (m20200002@novaims.unl.pt)

***Abstract*—The Abstract section succinctly summarizes the major aspects of the whole report in a single paragraph [4].**
Consisting of one paragraph of 150-250 words arranged in four sections, should summarize the most important points in the report: subject matter and purposes of the study (Introduction), the methodology applied (Methodology), the results (Results) and their interpretation (Conclusions). Sentences which do not convey useful information should be avoided. Concluding, an abstract should be viewed as a miniversion of the paper - it should provide a brief summary of each of the main sections [1].

Keywords : Project, Machine Learning, Decision Tree, Predictive Models, ...

I. Introduction

The Introduction section shows the current need for studying a specific problem [4].
The introduction should be brief and must state clearly the question that you tried to answer in the study [3]. In this way, this section should focus on the introduction of the problem. Every scientific report needs an introduction which presents background information a reader needs to understand the rest of the author's work [4].

II. Background

This section should explain the theoretical background of the techniques/algorithms who have not been explored during the practical classes and that are applied in the project. The theoretical background of the methods demonstrated in the practical classes should not be exposed in the report.

III. Methodology

The Methodology section describes the procedures and the materials used to conduct the study [4] . The main purposes of the methods section are to describe, and sometimes defend, the experimental design and to provide enough detail that a competent worker could repeat the study [3].

IV. Results

The Result section organizes the findings [4]. This section is the meat of a report, the most important part of a study. All other sections serve subordinate roles, either preparing the reader for the Results, or providing supplemental information to augment the findings. Results are general statements that present the key results (data) of the research without interpreting their meaning. The author should not include the raw data, but should present them as text, illustrations, and tables. All these three forms may be used, but the same data should not be repeated in more than one form. The results of statistical analyses should also be stated in this section [4].
The followings are important guidelines to consider in writing the Results section [4]:

1) It is not necessary to include all the collected data during the research. This isn't a diary. Select and emphasize only important and relevant data that will answer the question or solve the problem raised in the Introduction section.
2) Do not include information properly belonging to other sections of the paper such as Materials and Methods, or Discussions (if Results and Discussions are separated).
3) Prevent repeating the legends for figures or the titles of tables in the text.
4) Explain in the text only those illustrations and tables whose significance is not obvious to the reader. Important features that are readily apparent from the illustrations and tables should be pointed out in the text. Therefore, do not repeat the data presented in the illustrations and tables.
5) Be sure that the text, illustrations, and tables are consistent with one another. Make sure that all numerical values in all every table agree with the figures or data presented in it.
6) Analyze your data by statistical methods, if appropriate.
7) Be honest. Do not omit data that do not support your hypothesis and conclusion or do not answer the research question.

To conclude, the results section of a report has two key features: there should be an overall description of the major findings of the study; and the data should be presented clearly and concisely [3].

V. Discusion

The Discussion section attaches the findings to other existing scientific papers to form new ideas [4].
The Discussion section of a scientific article reiterates the main findings but in the context of furthering knowledge or impacting on teaching practice, or future research. In other words, the Discussion takes and interprets the findings reported in the Results section, evaluates their significance, and examines the implications. Among the whole sections of an article, this is probably the most challenging to write and will demonstrate how well the author understands the results. But it does not mean that the discussion should made long,

especially if there is little to discuss. [4]

VI. Conclusion

The conclusion presents the outcome of the work by interpreting the findings at a higher level of abstraction than the Discussion and by relating these findings to the motivation stated in the Introduction [2]. This section is the place where the author restates the contribution of the research, with a particular emphasis on what it allows others to do; and proposes new research directions to prevent duplication of effort or to encourage collaboration[4].

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VII. References

Every research project usually relies in part upon the work of other scientific works. Any time an author cites from external materials, he/she is required to identify his/her sources in the form of systematic references. The importance of References section of a report is not only for giving credit to the ideas and work of other scientists but also to provide the readers with access to these sources [4].

References

[1] Robert A Day. How to write and publish scientific papers, 1998.
[2] Jean-Luc Doumont, Laura Grossenbacher, Christina Matta, and Jorge Cham. English communication for scientists. 2014.
[3] George M Hall. *How to write a paper*. John Wiley & Sons, 2012.
[4] Parlindungan Pardede. Scientific articles structure. In *Scientific Writing Workshop*, volume 16, 2012.