Reproduction of "Predicting the Severity of a Reported Bug"

Andrina Vincenz
andrina.vincenz@uzh.ch
University of Zurich
Zurich, Switzerland

David Stalder
david.stalder@uzh.ch
University of Zurich
Zurich, Switzerland

ABSTRACT

Background. Bug fixing is a fundamental part of software maintenance. Bugs have different levels of severity according to their threat to the system and urgency to fixing.

Aim. The aim is to be able to have models which are able to identify the severity of bug reports.

Method. After identifying the system, bug reports will be extracted from bugzilla including the severity of the bug. This data is used to train two classifiers: SGDClassifier and Multinomial NaÃŕve Bayes. The following measurements are used to identify the quality of the model: precision, recall and f-measures.

Conclusion. This study will show if it is possible to generate models, which can do the classification of bug reports automatically with certainty. This can help software engineers in practice to classify their bug reports and focus on the most urgent.

1 INTRODUCTION

The introduction should give a general description of the problem domain. Moreover it should introduce the "Problem" providing background, such as the source of the problem, the negative consequences of the problem, and the potential benefits to solving the problem. In other words: why is the problem important? Or why is this research question important to answer?

Keep in mind that, if you are creating a research proposal, the scope of the work should correspond to that of a 6-month master thesis. So plan for resources and time accordingly.

2 RELATED WORK AND BACKGROUND

Any studies, tools, technologies that you rely on for your study and enrich your study are described here. This is **not** where you describe your solution. This is only where you give an overview of the most-important studies (and technologies you may use) that have been published before. If you are proposing a new feature location technique that combines Latent Semantic Indexing with Program Slicing, you should give a brief description of these in the background section. If you are proposing a study on evaluating social networks of developers, this is where you describe previous studies that did similar things. The background is **not** for rehashing the problem; it is for the supporting technologies/methods of the solution/study.

3 METHODOLOGY

In this section, you define the research questions that structure your study/solution.

3.1 Research questions

Write here the research questions and motivate why you pick specifically these ones. Explain and motivate each research question separately.

3.2 Research method

Here you describe exactly how you plan to answer each research question or, in case you're proposing a new solution, you start explaining your brand new, enlightened solution. What, precisely, are the inputs and outputs of your solution/study? What parameters will you use? What design decisions are you making and what is the rationale behind each decision? what gold sets do you use? Will you have human evaluators? If so, how many and who were they? What metrics are you planning to use? Etc.

This is also a great place for a concrete example. Pick out one example and explain it thoroughly. Show exactly what are the input and output of your approach.

3.3 Limitations/Threats to Validity

End the methodology section with a subsection called "Threats to Validity" or "Limitations" (depending on the research method you use) to let everyone know what you perceive as the weaknesses of your study, what you try to do about those weaknesses, and how different studies can tackle them.

4 CONCLUSIONS

Summarize your idea and explain what is the expected impact of your research proposal.

5 ACKNOWLEDGMENTS

Thank who needs to be thanked.

ACKNOWLEDGMENTS

To Robert, for the bagels and explaining CMYK and color spaces.

REFERENCES

A AN APPENDIX

A.1 Part One

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A.2 Part Two

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B ONLINE RESOURCES

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