Emotion Impacts in Coding Efficiency

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ABSTRACT

This report mainly discussed the impacts of different emotions may have on coding efficiency. We use both quantitative and qualitative analysis to find the results. For the quantitative analysis, we investigate the open-source repositories, mine the emotion hidden inside the commit messages and find the relationship between emotion and coding efficiency. For the qualitative analysis, we make some interviews with software engineers from dot-com companies, research teams and open-source community. Besides, some participants also shared their project emotional experience on other engineer-related approaches, which indicates some general clues of emotion impacts in computer engineering.

KEYWORDS

Emotion Mining, Coding Efficiency, Computer Engineering

1 INTRODUCTION

Brief introduction of the research topic, including the background information, the motivation and contribution of our research.

2 LITERATURE REVIEW

Detailed information of definition of emotions, categorization and emotional mining.
Major references are:[?],[?],[?],[?],[?],[?],[?],[?],[?],[?].

2.1 Definition & Categories of Emotions

The definition and features of emotions from a psychological aspect. Using a consistent categorization standard to analyze the emotions. Explain the categories and the words which belongs to these emotions. In this part, we will discuss definition from wikipedia[?], the Ekman emotion framework[?].

2.2 Emotion and productivity

In this part we will discuss how does emotion affect productivity. The papers are [?],[?],[?],[?],[?]

2.3 Emotional Mining

Introduce the emotional mining methods used in github. The papers discussed in this part are [?],[?],[?].

3 RESEARCH QUESTIONS

There are a number of research questions we plan to figure out through the research.

- How do we define and categorize different kinds of emotion?
- How do we know engineers' emotion from their codes?
- How do we measure the efficiency of coding?
- Does the emotion change have impact on the efficiency of coding?
- What effects will the emotion change cause on coding efficiency?

4 METHODOLOGY

We will collect and analyze our data in both qualitative and quantitative ways.

4.1 Quantitative Methods

4.2 Study 2: Semi-structured Interview

We designed an interview to make qualitative study on different groups of software engineers, including researchers in Universities, software engineers in large companies and open-source developers.

5 INTERVIEW

6 CONCLUSION

Conclude the paper by summarizing the findings of the research questions and our contributions. Then we will consider future works to improve our researches.