

Information Propagation Analysis on the Cover Problem of Journal "Artificial Intelligence"

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Abstract

In recent years, flaming phenomena on social media has become a big problem. In this paper, we try to reveal how an information propagated on Twitter. We overview and analyze one example of the information propagation by treating it in the community unit. This approach help us to understand how people got involved in the information propagation.

Keyword: Information Propagation Analysis, Twitter, Community Detection

1 Introduction

The Japanese Society for Artificial Intelligence changed their journal title to the "artificial intelligence" from the "Journal of Japanese Society for Artificial Intelligence". Along with this change, they also determined to change the design of the journal cover and solicited it by a using crowd-sourcing service. As a result, they adopted the design that draw "artificial intelligence in everyday life" as a human form and the cover which is drawn a female agent equipped with artificial intelligence who are doing the cleaning in one hand a book was published at the end of 2013. However, it was a problem with some points will lead to women discrimination (In this paper, we call this problem "the cover problem"). First, the agent is a female type. Second, the agent is connected to the code. Third, the female type agent done the housework. Forth, the expression of the agent is not bright.

Along with it, many people have been interested in this topic and many opinions about the cover problem has been posted on the web. There have been articles posted just related to not only artificial intelligence and gender but also various topics.

In this paper, we try to reveals how the cover problem of "artificial intelligence" propagated on Twitter. we divide users into communities and try overview the information propagation of the cover problem in the community unit and depict the information propagation diagram.

2 Methodology and Analysis

We analyze according to the following procedure.

1. Community Detection
2. Feature Word Extraction



Figure1: Information Propagation in User Communities

3. Information Propagation Analysis

We depict a information propagation diagram in Figure 1 and analyze the information propagation by overviewing Figure 1. It can be assumed the following two points from analysis results. First, various communities interested in the cover problem such communities 5018 , 5260 , 5947 , 15139. Those four communities have feature words respectively related to "electronic work", "programming language", "vocaloid", "military". Second, a community 9205 propagate the information to many groups. This community have feature words relative to no-nuclear problem.

3 Conclusion

In recent years, flaming phenomena on social media has become a big problem. In this paper, we could understand how the information of the cover problem, which is one example of flaming phenomena, propagated on Twitter by analyzing it in the community units. There is a possibility to be able to understand other flaming cases using our approach. In the future, we try to clarify the factors that influence flaming occurrence by comparing before and after flaming phenomena.