Information dissemination model based on multi-dimensional node influence in social networks

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Research

Keywords: Social networks, Node influence, Information dissemination, Epidemic model, Linear regression model

Posted Date: June 7th, 2020

DOI: <https://doi.org/10.21203/rs.3.rs-33229/v1>

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Abstract

Social network has gradually become the mainstream way for people to obtain and interact with information. The study on the law of information dissemination in social networks is of great significance to enterprise marketing, public opinion control and social recommendation. This paper puts forward a method that use multi-dimensional node influence and epidemic model to illustrate the causes and rules of information dissemination in social networks. Firstly, based on the multiple linear regression model, a measurement method of node influence is proposed from three dimensions: topology, user interaction behavior and information content. Then, taking the node influence as the cause of state transition, the information dissemination model based on the epidemic model is constructed, and the multidimensional factors affecting the information dissemination are analyzed. Meanwhile, the information dissemination trend in social networks is described.

Full Text

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Figures

Figure 1

Sample graph of information dissemination

Figure 2

Framework of Information dissemination model

Figure 3

Structure diagram of influencing factors of node influence

Figure 4

Encapsulated feature selection

Figure 5

The prediction model of node influence