

Title:

A Co-evolution Model of Network Formation and Content Generation on Social Reading Platform

Author:

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Abstract:

Understanding how individuals form social relationships and create content on social media is crucial for both academics and practitioners. In the field of representing the growth of social networks through statistical models, the co-evolution model is employed to jointly capture the formation of social relationships and individual behaviors, including content generation, as they mutually influence each other. However, there has been insufficient attention given to nonstructural aspects of behavior, such as the topics of generated text content. This research introduces a Bayesian co-evolution model that integrates a dynamic network formation model with a topic model to unveil the interdependent processes of network formation and content generation. The proposed model is empirically applied to data collected from a Japanese storytelling platform.