

A Hybrid Approach for Detecting Influencers in Social Media

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Résumé. La détection d'influenceurs dans les réseaux sociaux s'appuie généralement sur une structure de graphe représentant les utilisateurs et leurs interactions. Récemment, cette tâche a tenu compte, en sus de la structure du graphe, du contenu textuel généré par les utilisateurs. Notre approche s'inscrit dans cette lignée : des informations sont extraites du contenu textuel par des règles linguistiques puis sont intégrées dans un système d'apprentissage automatique. Nous montrerons le prototype développé et son interface de visualisation qui facilite l'interprétation des résultats.

1 Introduction

An influencer is a person or thing that has the power to affect people, actions or events. Influencer's detection concerns the problem of determining which users have the most influence in a certain social network. Such information is crucial in many research studies such as in sociology and information management domains. Additionally, with the frenetic growth of available data in online social network, being able to analyze and detect influential users becomes crucial as they are susceptible to express their ideas more strongly than other individuals. For example, this information could be used in marketing campaigns in order to maximize their spread (Richardson et Domingos, 2002).

Formally, the task for detecting influent users in a social network, deals with a graph $G = (V, E)$ where V represents the users in the network and E the interactions among them. Apart from the structural information, we also assume that each user produces information as textual content. Such content can induce new interactions between users through new textual content. Therefore, we consider the task of detecting influencers following two ways : analyzing the structure of social networks as well as their textual content.

Our method combines rich linguistic information along with structural properties in order to feed a machine learning model for scoring users. The work presented is part of the SOMA Eurostars project¹ which concerns the enhancement of customer relationship management systems with social media analysis capabilities.

1. <http://www.somaproject.eu/>, SOMA Eurostars program 9292/12/19892