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Applying fuzzy logic for sentiment analysis of social media network data in marketing

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Abstract

The amount of data freely available from social networking grows on an hourly basis. Much of this data concerns consumers perceptions and opinions of organizations, and as such is of interest to business intelligence gatherers in marketing, for customer relationship management and customer retention. With the use of soft computing, specifically fuzzy logic, it will be possible to design, create and build social bots that can analyse consumer comments in social media networks. Further programming would allow these social bots to interact with consumers, and carefully produced social bots would be able to disseminate marketing campaigns. This paper proposes a model for sentiment analysis of social media network data.

Keywords: soft computing application; fuzzy logic; social bots; sentiment analysis; social media networks; customer relationship management.

1. Introduction

The most commonly used social media networks are Facebook, YouTube, Instagram and Twitter. Currently, there are approximately 500 million tweets on Twitter per day, that's 6000 every second. (Internetlivestats, 2017). The exact numbers of users are shown in Table 1 below. Marketers use social media as part of their marketing strategy. Before planning a social media campaign, marketers need to know something about the consumer and their environment. They need to know the personality of the consumer, their past experiences, their responses to

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