3rd International Workshop on Mining the Social Web

Preface

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The last decade the Social Web is rapidly becoming an important part of our digital lives with shared information in formats that range from text to rich multimedia. Social web networks help to improve the sense of connectedness with real and/or online communities and can be effective communication tools for corporations and groups.

Modeling and mining the vast volume of data dynamically produced and maintained in social web environments is a great challenge in an effort to extract, represent and discover meaningful knowledge. Social web mining is a type of data mining, a set of techniques for analyzing social web data to detect patterns. It combines data mining with social computing with the purpose of developing novel algorithms and tools ranging from text and multimedia content mining to web structure mining and community detection.

Social web mining is applied in domains such as user modeling, recommendations, personalization, e-learning, e-recruitment, opinion mining, sentiment analysis, visualization, folksonomies, multimedia searching and so on. These trends raise the need for mining big data comprising heterogeneous, dynamic data trails, as well as the critical need for privacy, security and ethical considerations.

This workshop aimed at studying (and even going beyond) the state of the art in social web mining, a field that merges the topics of social network applications and web mining, which are both major topics of interest for ICWE. The basic scope is to create a forum for professionals and researchers in the fields of personalization, web search, text mining etc to discuss the application of their techniques and methodologies in this new and very promising research area.

The workshop tried to encourage the discussion on new emergent issues related to current trends derived from the creation and use of modern Web applications.

Five very interesting presentations took place in two sessions, followed by a constructive discussion in new research issues and collaborations

- "Measuring personal branding in Social Media: Towards an Influence Indication score" by Evanthia Faliagka, Kostas Ramantas, Maria Rigou, and Spiros Sirmakessis, Technological Educational Institution of Western Greece, University of Patras, Hellenic Open University, Greece and Iquadrat Informatica, Barcelona, Spain.
  The exploding use of social media sites has allowed everyday people to build their own online personal brand, exploiting the social web to promote their strengths and unique qualities. Such passionate individuals make great fits for certain roles in a company as well as in leadership positions. Moreover, for certain positions the ability of candidates to build a strong personal brand and attract a high number of followers is a robust success predictor. In this direction, authors propose a new module for assessing candidates' personal brand strength, based on their social web activity. This module is then integrated in a company-oriented e-recruitment system which automates the candidate pre-screening process and evaluated as part of a pilot scenario.
- "Harvesting Knowledge from Social Networks: Extracting Typed Relationships among Entities." by Andrea Caielli, Marco Brambilla, Stefano Ceri and Florian Daniel, Politecnico di Milano, Italy.

Knowledge bases like DBpedia, Yago or Google's Knowledge Graph contain huge amounts of ontological knowledge harvested from (semi-)structured, curated data sources, such as relational databases or XML and HTML documents. Yet, the Web is full of knowledge that is not curated and/or structured and, hence, not easily indexed, for example social data. Most work so far in this context has been dedicated to the extraction of entities, i.e., people, things or concepts. The paper describes authors' work toward the extraction of relationships among entities. The objective is reconstructing a typed graph of entities and relationships to represent the knowledge contained in social data, without the need for a-priori domain knowledge. The experiments with real datasets show promising performance across a variety of domains.

- "Novel Comment Spam Filtering Method on Youtube: Sentiment Analysis and Personality Recognition" by Enaitz Ezpeleta, Inaki Garitano, Ignacio Arenaza-Nuno, Urko Zurutuza and Jose Maria Gomez Hidalgo, Electronics and Computing Department, Mondragon University and Pragsis Technologies, Spain
  The deeply entrenched use of Online Social Networks (OSNs), where millions of users share unconsciously any kind of personal data, offers a very attractive channel to attackers. They provide the possibility of sending spam messages through different channels (wall posts, comments, private messages). In this paper authors propose a novel spam filtering method focused on social media spam. It aims to demonstrate that using sentiment analysis and personality recognition techniques, in order to analyze the content of the texts, the improvement of spam filtering results is possible. They add these features to each OSN spam both independently and jointly, and then we compare Bayesian spam filters with and without the new features in terms of the number of false positive and accuracy. At the end, the results of the top ten filtering classifiers have been improved, reducing also the number of false positives (26.69% on average), reaching an 82.55% of accuracy.

- "Mining Communication Data in a Music Community: A Preliminary Analysis", by Fabio Calefato, Giuseppe Iaffaldano, Filippo Lanubile, Antonio Lategano and Nicole Novielli, University of Bari, Dip. Informatica, Bari, Italy.
  Comments play an important role within online creative communities because they make it possible to foster the production and improvement of authors' artifacts. Authors investigate how comment-based communication help shape members' behavior within online creative communities. In this paper, they report the results of a preliminary study aimed at mining the communication network of a music community for collaborative songwriting, where users collaborate online by first uploading new songs and then by adding new tracks and providing feedback in forms of comments.

- "Analyzing Museums and Key Influential Users on Twitter during the 'European Night of Museums 2016'", by Brigitte Juanals and Jean-Luc Minel, IRSIC, Aix Marseille University and University Paris Nanterre - CNRS, France
  In this paper, authors start by presenting a representation of message flows and their lexical and topic contents on Twitter, then an instrumented methodology to describe and analyze these flows and their distribution among the various stakeholders. The aim is to explore the engagement and interactions between different types of stakeholders and to identify key influential users. They apply their methodology and tools to the 12th edition of the cultural event "European Night of Museums" (NDM16).

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