

Second International Workshop on Web Science and Information Exchange in the Medical Web (MedEx 2011)

Kerstin Denecke
L3S Research Center
Appelstrasse 9a
Hannover, Germany
denecke@L3S

Peter Dolog
Aalborg University
Selma Lagerlöfs Vej 300
Aalborg, Denmark
dolog@cs.aau.dk

ABSTRACT

The amount of Social Media Data dealing with medical and health issues increased significantly in the last couple of years. Medical Social Media Data now provides a new source of information within information gaining contexts. Facts, experiences, opinions or information on behavior can be found in the Medicine or Health 2.0 and could support a broad range of applications. This workshop is devoted to the technologies for dealing with social- and multi media for medical information gathering and exchange. This specific data and the processes of information gathering poses many challenges given the increasing content on the Web and the trade off of filtering noise at the cost of losing information which is potentially relevant.

Categories and Subject Descriptors

J3 [Life and Medical Sciences, H.3.3 [Information Storage and Retrieval]: Information Search and Retrieval

General Terms

Algorithms

Keywords

Web Science, Social Web

1. INTRODUCTION

Health information is exchanged to an increasing extent in the Web. Patients are blogging about their experiences in living with certain diseases. They discuss health-related queries in forums or even inform the public about their current health status via Twitter. Physicians are reporting about their daily experiences in treating patients. Beyond, research results and related issues are reported.

Medical Social Media Data now provides a new source of information within information gaining contexts. Facts, experiences, opinions or information on behaviour can be found in the Medicine 2.0 and could support a broad range of applications. Health organizations monitor online news repositories and web pages for relevant data on epidemiological events. Physicians learn about the experiences of their colleagues

provided through social media platforms: such as weblogs, or forums. Moreover, patients can search for information or experiences of others which can lead to patient empowerment.

The research community becomes increasingly aware of new possibilities and research challenges of the Medical Web. The intention of this workshop is to provide a platform for exchanging research ideas and work devoted to the challenges and technologies for dealing with social- and multi media for medical information gathering and exchange. Language peculiarities, content diversity, streaming nature of this specific data poses many challenges given the increasing content on the Web and the trade off of filtering noise at the cost of losing information which is potentially relevant. Further the processes of information gathering make several demands that need to be considered in research as well. The Second International Workshop on Web Science and Information Exchange in the Medical Web (MedEx 2011) offers the opportunity to present work related to these problems.

2. BACKGROUND

This workshop is intended to continue with the First International Workshop on Web Science and Information Exchange in the Medical Web that was held in conjunction with WWW 2010 in Raleigh. The topic of Medical Web Science and Information Exchange fits very well with the general theme of the WWW conference and attracted already high interest in its first release. Around 25 attendees joined the workshop, six papers were presented and we had an acceptance ratio of 75%. The workshop considers tasks and problems related to Web Science in one specific application domain, which is medicine. This domain and the problems are extremely relevant for current research, government and industry. Government and health organizations become increasingly aware that there is a need for considering the developments in the medical Web. Possible application scenarios are currently set up and researchers start to develop appropriate technologies.

Furthermore, the organizers of the workshop coordinate and participate in an European project (STREP, M-Eco <http://www.meco-project.eu>) that focuses on this topic. The consortium is composed of researchers typically publishing at Web Science, Data mining and NLP venues; therefore the workshop provides an initial forum for them to further pursue these directions and to provide high level contributions.

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3. OBJECTIVES

The aim of the workshop is to encourage researchers from the medical web science community to present novel issues and techniques related to medical intelligence (especially in the context of web science). This workshop is intended to address different aspects related to the problem of accessing, exchanging, processing, and filtering health related Web information. Another important question is how to make corresponding applications more reliable and adaptable. The workshop serves as a forum for the confluence of new and multidisciplinary ideas that will help to drive research in the areas of medical web text and data mining.

4. TOPICS

The workshop theme and topics are reflecting the latest discussion in that upcoming field and comprise the analysis of medical social media data and multi media data, including event detection and information extraction in this field. Even though it would be very useful, personalization techniques are still not integrated or only implemented to a limited extent in medical applications. Evaluation of implemented medical applications working with Medical Web data is still a problem due to missing annotated data sets and gold standards. This workshop is intended to encourage researchers thinking also into this direction.

In more details, papers covering at least one of the following topics are expected:

- Analysis of medical social media data
 - Ways and means of analysing large-scale medical web data
 - Criteria and methods to determine the quality of health content
 - Multilingual issues in health-related Web content
 - Processing streams of social media data
- Analysis of medical multi media data

- Classifying medical media content (e.g., TV, Radio, YouTube)
- Processing of medical media data
- Event Detection and information extraction in medical social/multi- media
 - Event extraction from medical texts
 - Identification of relationship between events
- Personalization in medical applications
 - Personalized biosurveillance
 - Personalized e-Health solutions
 - User models for health care applications
- Evaluation in medical web applications
 - Quality of processing of medical social/multi- media data
 - Methods for improving medical intelligence sensitivity and specificity
 - Medical intelligence false alarm mitigation

5. CONCLUSIONS

There is an increasing interest in using Web data in various applications supporting medicine and health. The Second MedEx workshop will provide the platform for ongoing discussions on this topic and will allow to exchange research ideas and work.

6. ACKNOWLEDGMENTS

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