6th International Workshop on
Mining Ubiquitous and Social Environments (MUSE)

Introduction

The 6th International Workshop on Mining Ubiquitous and Social Environments (MUSE 2015) was held in Porto, Portugal, on September 7th 2015 in conjunction with the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD 2015).

Objectives

The emergence of ubiquitous computing has started to create new environments consisting of small, heterogeneous, and distributed devices that foster the social interaction of users in several dimensions. Similarly, the upcoming social web also integrates the user interactions in social networking environments.

In typical ubiquitous settings, the mining system can be implemented inside the small devices and sometimes on central servers, for real-time applications, similar to common mining approaches. However, the characteristics of ubiquitous and social mining in general are quite different from the current mainstream data mining and machine learning. Unlike in traditional data mining scenarios, data does not emerge from a small number of (heterogeneous) data sources, but potentially from hundreds to millions of different sources. Often there is only minimal coordination and thus these sources can overlap or diverge in many possible ways. Steps into this new and exciting application area are the analysis of this new data, the adaptation of well known data mining and machine learning algorithms and finally the development of new algorithms.

Mining big data in ubiquitous and social environments is an emerging area of research focusing on advanced systems for data mining in such distributed and network-organized systems. Therefore, for this workshop, we aim to attract researchers from all over the world working in the field of data mining and machine learning with a special focus on analyzing big data in ubiquitous and social environments.

The goal of this workshop is to promote an interdisciplinary forum for researchers working in the fields of ubiquitous computing, mobile sensing, social web, Web 2.0, and social networks which are interested in utilizing data mining in a ubiquitous setting. The workshop seeks for contributions adopting state-of-the-art mining algorithms on ubiquitous social data. Papers combining aspects of the two fields are especially welcome. In short, we want to accelerate the process of identifying the power of advanced data mining operating on data collected in ubiquitous and social environments, as well as the process of advancing data mining through lessons learned in analyzing these new data.

Submissions and Keynotes

This proceedings volume comprises the contributions to the MUSE 2015 workshop. In total, we accepted four submissions, three full papers and one short paper, based on the peer-reviews of our program committee. In addition, the scientific program also featured three invited talks: Michele Berlingerio (IBM Research and Development, Dublin, Ireland) provided an overview on Multidimensional Network Analysis including their history, modeling and analysis aspects and current applications in the context of ubiquitous and social environments. Markus Schedl (University of Linz, Austria) presented recent research result about Listener-aware Music Search and Recommendation, also giving insights in recent prototype applications. Finally, Albert Bifet (Université Paris-Saclay) showcased recent developments in Data Stream Mining with a special focus on the Apache SAMOA platform.

Submissions and Keynotes

- Christian Bauckhage, Fraunhofer IAIS, Germany
- Martin Becker, University of Wuerzburg, Germany
- Albert Bifet, University of Waikato, New Zealand
- Stephan Doerfel, University of Kassel, Germany
- Jill Freyne, CSIRO, Australia
- Andreas Hotho, University of Wuerzburg, Germany
- Mark Kibanov, University of Kassel, Germany
- Claudia Mueller-Birn, FU Berlin, Germany
- Nico Piatkowski, TU Dortmund University, Germany
- Haggai Roitman, IBM Research Haifa, Israel
- Philipp Singer, GESIS Koeln, Germany
- Maarten van Someren, University of Amsterdam, The Netherlands
- Gerd Stumme, University of Kassel, Germany
- Arkaitz Zubiaga, University of Warwick, UK

Acknowledgements

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Martin Atzmueller
Florian Lemmerich