



Scientific Journal KI – KÜNSTLICHE INTELLIGENZ

Special Issue: Social Media

Special Issue on Social Media

The tremendous growth in the use of Social Media has led to radical paradigm shifts in the ways we communicate, collaborate, consume, and create information. **Our focus in this special issue is on the reciprocal interplay of Social Media and Collective Intelligence.**

This special issue (2013) includes papers that show, first, how to make sense of social media data, i.e. **how to condense, distill, or integrate highly decentralized and dispersed data resulting from human communication**, and second, **how social media contributes to innovation, collaboration, and Collective Intelligence.**

Content

This special contains three full research papers, a survey paper, a project description, two interviews, a tutorial, and two reports on completed doctoral theses.

- > The opener is an overview article by the guest editors of this special issue, in which they focus on the **constituting attributes of Social Media and Collective Intelligence**. They structure the rapidly growing body of research at the intersection of Social Media and Collective Intelligence, and conclude with some **propositions for further research**.
- > In the second article, "**Learning to Discover Political Activism in the Twittersverse**", *Samantha Finn* and *Eni Mustafaraj* study political discussions on Twitter. They propose a supervised machine learning approach to separate Twitter accounts into two groups: "political activists" and "general public". With this work the authors show that machine learning algorithms can play a critical role in improving the quality of social media analytics and understanding.
- > The third article, "**Can Computers Learn from the Aesthetic Wisdom of the Crowd?**" by *Christian Bauckhage* and *Kristian Kersting* addresses the interesting topic of teaching an algorithm to recognize the aesthetic appeal of images. By working on a large dataset of tagged images from Flickr, they find that automatic classification of aesthetic appeal is indeed possible based on established low-level image features. Their results have implications for the fields of AI and computer vision as well as Collective Intelligence.
- > Fourth is an article by *Peter A. Gloor*, *Daniel Oster*, and *Kai Fischbach* titled "**JazzFlow – Analyzing 'Group Flow' among Jazz Musicians Through 'Honest Signals'**", in which the data from sociometric badges during a live performance of a group of jazz musicians. They find that "honest signals" play an essential role in enabling the smooth operation of

such teams. Their findings hold interesting implications for research in group dynamics and creativity in self-organizing teams not only in music but also in companies relying on creativity and innovation.

- > Further, we include a project description by *Joshua Introne*, *Robert Laubacher*, *Gary Olson*, and *Thomas Malone*. In their contribution, "**Solving Wicked Social Problems with Socio-computational Systems**," they describe how the MIT Climate CoLab project may help in solving global climate change problems while taking advantage of Collective Intelligence and collaborative planning.
- > We follow with two interviews by major researchers in social media and AI. First, is an **interview with Prof. James A. Hendler**, an artificial intelligence researcher at Rensselaer Polytechnic Institute, USA, and one of the originators of the Semantic Web. He highlights the evolution of current technologies with the help of semantics and the need for agents that can support the development and evolution of social machines. Next, is an **interview with Dr. Bernado Huberman**, senior HP Fellow and director of the Social Computing Research Group at HP Labs, where he talks about the opportunities and challenges that come with using Social Media as a data source for research.
- > In their **brief tutorial**, *Marc Egger* and *André Lang* summarize the process steps needed to **analyze social media data**. Their paper focuses on the challenges that emerge from finding, collecting and analyzing user-generated content from the Web.
- > We conclude this special issue with summaries of two PhD dissertations. "**Crowd-Powered Systems**" by *Michael S. Bernstein* shows how hybrid systems that combine computation with human intelligence from the crowd enable new applications and experiences. In her PhD thesis, "**From Texts to Networks: Detecting and Managing the Impact of Methodological Choices for Extracting Network Data from Text Data**", *Jana Diesner* addresses methodological problems related to extracting information about networks from text data.

Further Information

To get further information about this special issue scan the QR Code or visit www.kuenstliche-intelligenz.de/index.php?id=7793.



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The scientific journal KI – KÜNSTLICHE INTELLIGENZ – is the German Journal on Artificial Intelligence, mouthpiece of the Department of Artificial Intelligence (AI) in the Gesellschaft fuer Informatik e.V. (GI) with contributions spanning all areas of AI.



Social Media

As a minimal consensus, "social media" is taken as a generic term for social interactions built on a multitude of digital media and technologies, which allow users to create and share content and to act collaboratively.

Prominent examples of companies offering related services include online social networking platforms such as Facebook, LinkedIn, and Google+, micro-blogging sites such as Twitter and Sina Weibo, Tumblr, and platforms for exchanging visual media such as YouTube and Flickr.

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