Mining Actionable Insights from Social Networks at WSDM 2017

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ABSTRACT
The first international workshop on Mining Actionable Insights from Social Networks (MAISoN'17) is to be held on February 10, 2017; co-located with the Tenth ACM International Web Search and Data Mining (WSDM) Conference in Cambridge, UK. MAISoN'17 aims at bringing together researchers and participants from different disciplines such as computer science, big data mining, machine learning, social network analysis and other related areas in order to identify challenging problems and share ideas, algorithms, and technologies for mining actionable insight from social network data. We organized a workshop program that includes the presentation of eight peer-reviewed papers and keynote talks, which foster discussions around state-of-the-art in social network mining and will hopefully lead to future collaborations and exchanges.

1. INTRODUCTION
The wide adoption of social network churns out an ocean of data which presents an interesting opportunity for mining the data and discover new knowledge to predict real-world outcomes [2, 7]. The enormity and high variance of the information that propagates through large user communities influence the public discourse in e the society and sets trends and agendas in topics that range from marketing, education, business and medicine to politics, technology and the entertainment industry. Mining the attributes and contents of social networks provides an opportunity to discover social structure characteristics, analyze action patterns qualitatively and quantitatively, and can lead to the ability to predict future events [1, 5, 6]. In recent years, decision makers have become savvy about how to translate social data into actionable information in order to leverage them for a competitive edge. In particular, marketers aggregate the opinions of the collective population to dynamically calibrate, anticipate and offer products and services that meet perpetually shifting consumer demands in a hyper-competitive marketplace [3, 8]. The traditional research in social network mainly focus on theories and methodologies on community discovery, pattern detection and evolution, behavioral analysis and anomaly and misbehavior detection [4, 9, 10]. The main distinguishing focus of this workshop will be the use of social media data for building predictive models that can be used to uncover hidden and unexpected aspects of user-generated content in order to extract actionable insight from them. The objectives will be to transform the insight into effective actions which could help organizations improve and refine their strategies.

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2. OBJECTIVE
The objective of this workshop is to bring researchers and practitioners from different disciplines such as computer science, big data mining, machine learning, social network analysis and other related areas together to share their ideas and research achievements in order to deliver technology and solutions for mining actionable insight from social network data. We expect the workshop will foster discussions around state-of-the-art in social network mining and will lead to future collaborations and exchanges.

3. TOPICS OF INTEREST
The MAISoN workshop is a platform to share emerging topics in social network mining especially as it pertains to the identification and extraction of actionable insights. The topics of the workshop include but are not limited to the following:

- Predictive modeling based on social networks such as
  - Box office prediction
  - Election prediction
  - Flu prediction
- Product adaptation models with social networks such as
  - Sale price prediction
  - New product popularity prediction
  - Brand popularity
  - Business downfall prediction
- User modeling and social networks including
  - Predict users' daily activities including recurring events
  - User churn prediction
  - Determining user similarities, trustworthiness and reliability
- Social networks and information and knowledge dissemination
  - Topic and trend prediction
  - Prediction of information diffusion patterns
  - Identification of causality and correlation between event/topics/communities
- Information diffusion modeling with social networks
  - Sentiment diffusion in social network
  - Competitive intelligence from social networks
- Merging internal (proprietary) data with social data

- Feature Engineering from Social Networks
- Datasets and Evaluation methodologies for predictive modeling in social networks

4. ORGANIZERS

The workshop is a successful collaboration between the very esteemed members of the program committee and the program committee chairs. We had the pleasure of having the following colleagues as a part of the program committee:

Rajendra Akerkar, Western Norway Research Institute
Eric Cambria, Nanyang Technological University
Pablo Castells, Universidad Autónonoma de Madrid
Aron Culotta, Illinois Institute of Technology
Gianmarco De Francisci Morales, Qatar Computing Research Institute
Ulrike Gretzel, University of Southern California
Jiun-Long Huang, National Chiao Tung University
Meng Jiang, University of Illinois at Urbana-Champaign
Jaap Kamps, University of Amsterdam
Jimmy Lin, University of Waterloo
Yu-Ru Lin, University of Pittsburgh
Huan Liu, Arizona State University
Symeon Papadopoulos, Information Technologies Institute (ITI)
Hemant Purohit,George Mason University
Marc Spaniol, Université de Caen Basse-Normandie

We would also like to thank Suhas Ranganath from Arizona State University for serving as an external reviewer. This year's PC chairs included:

- Faezeh Ensan, Ferdowsi University of Mashhad
- Zeinab Noorian, Ryerson University
- Ebrahim Bagheri, Ryerson University

5. WORKSHOP PROGRAM

The program will be presented in the form of a full day workshop with invited talks from industry leaders. The confirmed keynote for the workshop will be delivered by Dr. Emre Kiciman from Microsoft Research and he will talk about "Learning about Personal Experiences and their Outcomes: Analyzing Social Media as an Observational Study". Also in addition to the keynote talk, the PC has accepted eight research papers on a diverse range of topics. The full list of papers is included below:

1. Javier Garcia-Bernardo and Frank Takes. The Effects of Data Quality on the Analysis of Corporate Board Interlock Networks
2. Cheng Li, Xiaoxiao Guo and Qiaozhu Mei. DeepGraph: Graph Structure Predicts Egonet Growth
3. Sneha Mondal, Swapnil Dhamal and Y. Narahari. Two-Phase Influence Maximization in Social Networks with Seed Nodes and Referral Incentives
4. Hogun Park, John Moore and Jennifer Neville. Deep Dynamic Relational Classifiers: Exploiting Dynamic Neighborhoods in Complex Networks
5. Zekarias Kefato and Alberto Montresor. Personalized Influencer Detection: Topic and Exposure-Conformity Aware
6. Christos Vlassopoulos, Alexander Artikis and Georgios Paliouras. Assessing Trustworthiness in Social Networks using Run-Time Event Recognition
7. Madhushi Bandara, Dharshana Kasthurirathna, Danaja Maldeniya and Mahendra Piraveenan. Detecting geographically dispersed overlay communities using community networks
8. Sicong Kuang and Brian Davison. Class-specific Word Embedding through Linear Compositionality

6. ACKNOWLEDGMENTS

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