World Wide Web journal

Internet and Web Information Systems

~Special Issue Call for Papers~

Title： Deep vs Shallow: Learning for Emerging Web-scale Data Computing and Applications

GUEST EDITORS:

Jingkuan Song, Columbia University, USA. Jingkuan.song@gmail.com
Shuqiang Jiang, Chinese Academy of Sciences, China. sqjiang@ict.ac.cn
Elisa Ricci, University of Perugia, Italy. elisa.ricci@unipg.it
Zi Huang, The University of Queensland, Australia. huang@itee.uq.edu.au

SCOPE:

Today, large collections of web data are explosively created in different fields and have attracted increasing interest in the research community. Big web data can be seen in the social media where thousands of tweets, millions of Facebook “likes”, and billions of check-ins on Foursquare are collected to enrich people’s daily life. It can also be seen in the finance and business where large amount of stock exchange, online and onsite transactions data flows are captured for inventory monitoring and customer behavior analysis. Big web data provides unprecedented opportunities to address many challenging research problems. Recent success of deep learning has shown that it outperforms state-of-the-art systems in web search, recommendation systems, text analysis, summarization of web data, etc. Therefore, deep learning has a large potential to improve the intelligence of the WWW and the web service systems by efficiently and effectively utilizing big data on the Web. However, deep learning is not omnipotent. Shallow learning is still dominant in fields such as web data storage, real-time computing and association rule mining. It is critical to utilize both deep and shallow learning models to support web-scale data computing and applications.

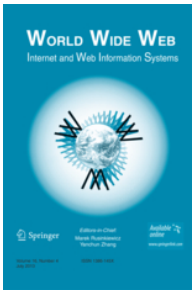
On the other hand, the explosion of big data raises more challenges for learning and puts urgent needs for novel applications. Given the high volume, high velocity, and high variety of big web data that require new forms of processing to enable efficient retrieval, insight discovery and process optimization, there are a lot of research challenges. For example, based on these unprecedented large amount of data, what kinds of novel tools and deployment platforms can be developed to facilitate data storage? This motivates us to design parallel or distributed platforms. Moreover, how do the traditional query and indexing algorithms (proven efficient and effective in small-sized data) be scaled up to millions and even billions of items? The researchers in this topic produced big data indexing techniques as well as using cloud computing. Besides, it is also important to mine useful information and design interesting applications to fully explore the big data treasure.

Topics of Interests:

This special issue targets the researchers and practitioners from both the industry and the academia, and intends to explore how advanced learning models can be leveraged to address the challenges in web-scale data computing and applications. It provides a forum to publish recent state-of-the-art research findings, methodologies,

PAPER SUBMISSION:

- Authors are encouraged to submit high-quality, original work that has neither appeared in, nor is under consideration by, other journals.
- All papers will be reviewed following standard reviewing procedures for the Journal.
- Papers must be prepared in accordance with the Journal guidelines: http://www.springer.com/11280 .
- Submit manuscripts to: http://WWWJ.edmgr.com.



World Wide Web Journal **www.Springer.com/11280**
Editors-in-Chief: M. **Rusinkiewicz**; Y. **Zhang**
Published by Springer.

technologies and services in the web-scale data. We invite original and high quality submissions addressing all aspects of this field, which is closely related to large-scale data retrieval, data management, classification, data mining for social media, and so on.

Topics of interest include, but are not limited to:

- Big data storage, indexing, and searching
- Deep learning for web-scale data analysis
- Topics discovering and monitoring from social websites
- Indexing algorithms for large-scale web data retrieval
- Compression techniques for large-scale multimedia retrieval
- Image annotation and classification with deep learning
- Clustering for large-scale multimedia data
- Knowledge mining from large-scale social media
- Storyline summarization for large scale social media
- Efficient optimization algorithms for large-scale learning
- Algorithms and applications with large-scale social media
- Other applications of large scale multimedia data

IMPORTANT DATES:

- Paper Submission: August 15, 2017
- First Notification: Nov. 1, 2017
- Revised Manuscript: Jan. 1, 2018
- Notification of Acceptance: Feb. 15, 2018
- Final Manuscript Due: April. 1, 2018

GUEST EDITOR BIOS:

Jingkuan Song is currently a Postdoctoral Research Scientist in Columbia University. He joined a University of Trento as a Research Fellow (2014-2016). He obtained his PhD degree in Information Technology from The University of Queensland (UQ), Australia, in 2014. He received his BS degree in Computer Science from University of Electronic Science and Technology of China. His research interest includes large-scale multimedia retrieval, image/video segmentation and image/video annotation using hashing, graph learning and deep learning techniques. Jingkuan serves as a lead guest editor for TMM special issue on 'Large-scale Multimedia Data Retrieval, Classification, and Understanding'. He is also a reviewer for IEEE TPAMI, TIP, TMM, TKDE, TCB, etc. He is a member of IEEE, and a member of ACM.

Zi Huang is an ARC Future Fellow in School of ITEE, The University of Queensland. She received her BSc degree from Department of Computer Science, Tsinghua University, China, and her PhD in Computer Science from School of ITEE, The University of Queensland. Dr. Huang's research interests mainly include multimedia indexing and search, social data analysis and knowledge discovery. She has authored or coauthored papers that have been published in leading conferences and journals, including ACM Multimedia, ACM SIGMOD, IEEE ICDE, the IEEE TMM, WWW Journal, the IEEE TKDE, the ACM TOIS, and ACM Computing Surveys.

Shuqiang Jiang is a professor with the Institute of Computing Technology, Chinese Academy of Sciences, Beijing. He is also with the Key Laboratory of Intelligent Information Processing, Chinese Academy of Sciences. His research interests include multimedia processing and semantic understanding, pattern recognition, and computer vision. He has authored or coauthored more than 100 papers on the related research topics. Jiang was supported by the New-Star program of Science and Technology of Beijing Metropolis in 2008. He won the Lu Jiaxi Young Talent Award from Chinese Academy of Sciences in 2012, and the CCF Award of Science and

Technology in 2012. He is the senior member of IEEE, member of ACM, CCF, and YOCSEF. Jiang is the executive committee member of ACM SIGMM China chapter. He has been serving as the guest editor of the special issues for PR and MTA. He is the program chair of ICIMCS2010, special session chair of PCM2008, ICIMCS2012, area chair of PCIVT2011, publicity chair of PCM2011 and proceedings chair of MMSP2011. He has also served as a TPC member for more than 20 well-known conferences, including ACM Multimedia, CVPR, ICCV, ICME, ICIP, and PCM.

Dr. Elisa Ricci is a researcher at FBK and an Assistant Professor at University of Perugia. She received her MSc and PhD degree in Electrical Engineering from the University of Perugia in 2004 and 2008, respectively. After that, she was a postdoctoral researcher at Idiap Research Institute, Switzerland and a visiting researcher at the Swiss Federal Institute of Technology (ETH) and University of Bristol, UK. Her main research interests are directed along developing machine learning and especially deep learning algorithms for human behavior analysis, video scene understanding and multimedia content analysis. She received the ACM Multimedia 2015 best paper award, the IBM Best Student Paper award at ICPR 2014 and the INTEL Best Paper award at ICPR 2016. She is associate editor of IEEE Transactions on Multimedia. She was/is Area Chair at ACM MM 2016, ECCV 2016, ACM MM 2017, ICCV 2017. She regularly serves as reviewer and program committee member of top-level journals and conferences in computer vision and multimedia. She is a member of IEEE and of the International Association for Pattern Recognition IAPR.