Assessing Expertise in the Enterprise: The Recommender Point of View

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Abstract:
Some of the largest worldwide employers today are knowledge-based enterprises whose most important asset is human capital. Knowledge workers are unique, each having individualized skills, competencies and expertise, which constantly evolve and expand. Managing and planning for such a workforce critically depends on the ability to construct complete, accurate, and real-time representation and inventory of the expertise of employees in a form that integrates with business processes. In this session Saška will describe how enterprise expertise assessment process can be posed as predictive modeling and recommendation problem, and will present results and lessons learned from an actual deployment of IBM Expertise, a corporate-wide expertise recommendation and management system.

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recommender systems; expertise; social; predictive modeling

Bio:
Aleksandra (Saška) Mojsilović manages Data Science Group at the IBM T. J. Watson Research Center in Yorktown Heights, New York. Saška is one of the pioneers of business analytics at IBM an in the industry; throughout her career she championed innovative uses of analytics for business decision support: from the early identification of client risk via predictive modeling, to the estimation of outsourcing benefits via signal analysis in support of IBM marketing campaigns, retention analytics, and identifying and recommending experts in the enterprise. For her technical contributions and the business impact of her work, Saška was appointed an IBM Fellow, the company's highest technical honor. Saška received her PhD in Electrical Engineering in 1997 from the University of Belgrade, Belgrade, Serbia. She has worked at Bell Laboratories (1998-2000) and IBM Research (2000-present). Her main research interests include multidimensional signal processing, pattern recognition and machine learning, with applications to business analytics, healthcare, financial modeling, multimedia and social systems. She is the author of over 100 publications and holds 14 patents. Saška received a number of awards for her work, including the IEEE Young Author Best Paper Award, INFORMS Wagner Prize, IEEE International Conference on Service Operations and Logistics and Informatics Best Paper Award, European Conference on Computer Vision Best Paper Award, IBM Gerstner Award, IBM Market Intelligence Award and several IBM Outstanding Technical Achievement Awards.

Kush R. Varshney was born in Syracuse, NY in 1982. He received the B.S. degree (magna cum laude) in electrical and computer engineering with honors from Cornell University, Ithaca, NY, in 2004. He received the S.M. degree in 2006 and the Ph.D. degree in 2010, both in electrical engineering and computer science at the Massachusetts Institute of Technology (MIT), Cambridge. He is a research staff member in the Data Science Group of the Mathematical Sciences and Analytics Department at the IBM T. J. Watson Research Center, Yorktown Heights, NY. He is also a data ambassador with DataKind, New York, NY. His research interests include statistical signal processing, machine learning, data mining, and image processing. Dr. Varshney is a member of Eta Kappa Nu, Tau Beta Pi and ACM, and a senior member of IEEE. He has received a Best Student Paper Travel Award at the 2009 International Conference on Information Fusion, the Best Paper Award at the 2013 IEEE International Conference on Service Operations and Logistics, and Informatics, the Best Social Good Paper Award at the 2014 ACM SIGKDD Conference on Knowledge Discovery and Data Mining, a Best Research Paper Honorable Mention at the 2015 SIAM International Conference on Data Mining, and several IBM awards for contributions to analytics projects. He is on the editorial board of Digital Signal Processing and a member of the IEEE Signal Processing Society's Machine Learning for Signal Processing Technical Committee and Signal Processing Theory and Methods Technical Committee.

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