PROGRAM OF EVENTS

New Frontiers of Prescriptive and Predictive Analytics
October 21st, 2016
University of Chicago Gleacher Center
Room 100
Chicago, IL
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AGENDA AT-A-GLANCE

8:30 – 9:00 a.m.  Registration and Networking
9:00 – 9:15 a.m.  Welcome
9:15 – 10:00 a.m. Keynote Presentation
Thomas McDermott, Chief Program Officer at UI LABS
10:00 – 10:15 a.m. Break
10:15 – 11:15 a.m. Panel Presentation
Moderator: Pan Chen (HAVI)
Panelists include: Linus Schrage (Lindo Systems), Vikram Subramanian (Groupon), Ram Muthukrishnan (ex-Cisco, McKinsey, United Airlines)
11:30 – 12:30 p.m. Networking Lunch
12:30 – 3:15 p.m. Breakout Sessions

Track 1 | Track 2
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12:30 – 1:15 p.m.
Adam McElhinney | Veena Mendiratta
Uptake | Nokia Bell Labs
Applications of Machine Learning to IoT | Anomaly Detection in Wireless Networks using Mobile Phone Data
1:15 – 1:30 p.m. Break
1:30 – 2:15 p.m.
Venkat Vasan | Derek Nelson
SAP | Accenture
Insight to Outcomes - the real value of the Internet of Things (IoT) | Coupling Machine Learning and Optimization to Improve Profits in Online Retail
2:15 – 2:30 p.m. Break
2:30 – 3:15 p.m.
Andy Minteer | Nitin Maheshwari
Navistar | Ramco Systems
IoT in Heavy Automotive Industry | Use of next gen. tech. in the airline industry
3:10 – 4:00 Q&A and Raffle
Event Overview

In emerging industries across the nation, analytics professionals and data scientists are drawing upon a new level of specificity to individual use cases and models in delivering business solutions. For example, in the Internet of Things (IoT), the shift to event-based processing allows for real-time analytics and the ability to harmonize the IoT ecosystem and create value. As another example in sports, analytics is being used to determine which players are worth drafting, which will best fit into individual clubs; and sports enthusiasts, journalists and fans have access to systems with win-loss records to help determine the outcome of an event.

IMPACT 2016 brings together leading analytics and business practitioners who work on the cutting edge where they will share their work and professional insights with practitioners. This action-packed one-day conference will cover topics in

- New Industry – that explores application of analytics to non-traditional industries (e.g. new generation prognostics talk by Adam McElhinney)
- New Technology – that explores new analytics technologies in established industries (e.g. Use of emerging technology by SAP talk by Venkat Vasan)
- New Use Cases – that explores innovative applications to new use cases (e.g. applications in Healthcare)

SESSION DESCRIPTIONS AND SPEAKER BIOGRAPHIES

9.15 AM – 10.00 AM Keynote Speaker

Speaker: Thomas McDermott, Chief Program Officer at UI LABS

In his role as Chief Program Officer, Tom McDermott works across the UI LABS organization, with a focus on DMDII, to oversee program planning and operations. He is responsible for optimizing execution for overall impact for UI LABS, partners, and other stakeholders.

Prior to joining UI LABS, Tom was an Engagement Manager in McKinsey & Company’s Operations Practice, where he led numerous strategy and operations projects across multiple industries with extensive experience in manufacturing, service operations, and logistics topics. Tom joined McKinsey from the US Navy, where he served as a submarine officer; he was responsible for directing both ship and nuclear power plant operations. He also served as a Naval ROTC assistant professor at Boston University and MIT, where he taught engineering and weapons systems courses to future naval officers. Tom holds a Bachelor of Science in Ocean Engineering from the United States Naval Academy and an MBA from the Kellogg School of Management.

10.15 PM – 11.15 PM Panel Discussion

Topic – Connecting Advanced Analytics to Deliver Intelligent Business Value Creation

Advanced Analytics is changing the way businesses compete, operate, and deliver new business value to their customers, improving on all business aspects. This topic will explore best practices in three key areas tied to new business value creation:

- How to develop sound frameworks that take into account the technical aspects of scaling analytics (across operating lines of business and with disjointed information and management systems)
- How to address real world business challenges and connect the dots to business value.
- How to measure the true value and impact of analytics on business outcomes.

Vikram Subramanian
Director Operations, Groupon

Linus Schrage
LINDO Systems

Dr. Ram Muthukrishnan
Strategy Advisor
12.30 PM – 1.15 PM Track 1

**Topic - Applications of Machine Learning to Internet of Things (IoT) and Industrial Equipment**

The proliferation of sensor technologies has resulted in more connected machines than ever before. This change is resulting in huge quantities of sensor data becoming available for analysis. Machine learning algorithms have resulted in a mixed track record of success with these data sources. This talk will give an overview of the state of machine learning as applied to IoT and industrial equipment. It will discuss some of the challenges with current approaches, exciting theoretical advancements and some "lessons learned" from the field.

**Speaker:** Adam McElhinney, Head of Data Science at Uptake Technologies

Adam McElhinney is currently the Head of Data Science at Uptake Technologies, where he leads a team of 45 Data Scientists building cutting-edge industrial data analytics tools. Formerly, he was the Head of Business Analytics and the Head of Marketing Analytics at Enova Financial where he helped grow the company from a small startup to a publicly traded online lending leader that currently employs more than 1,000 associates in the Chicagoland area.

He has previously worked as a management consultant as well as an analyst designing simulations for the Department of Defense. Adam is serving his seventh year on the Board of the Chicago Chapter of the American Statistical Association. Formerly Adam was also the Director of the Mentorship Program for the HFS Chicago Scholars.

Adam holds a Masters in Statistics from University of Illinois-Chicago and has undergraduate degrees in Mathematics, Economics and Political Science from Indiana University-Bloomington.

12.30 PM – 1.15 PM Track 2

**Topic - Anomaly Detection in Wireless Networks using Mobile Phone Data**

Communications traffic on wireless networks generates large volumes of metadata on a continuous basis across the various servers involved in the communication session. Since these networks are engineered for high reliability, the data is predominantly normal with only a small proportion of the data being anomalous. It is, however, important to detect these anomalies when they occur because such anomalies are indicators of vulnerabilities in the network. In this work we will present the use of neural network based Kohonen Self Organizing Maps (SOM) and visual analytics for network anomaly detection and analysis using data from a 4G wireless network.

**Speaker:** Veena Mendiratta, Applied Researcher at Nokia Bell Labs

Veena Mendiratta is an applied researcher at Nokia Bell Labs (formerly AT&T, Lucent, Alcatel-Lucent), based in Naperville, Illinois, where her work is focused on telecom data analytics and on architcting next generation programmable communication networks for high performance and reliability.

She has led projects on customer experience analytics using data mining and social network analysis techniques, and the development of analytics-based algorithms and visual analytics for anomaly detection in telecommunications networks. She holds a PhD in Operations Research from Northwestern University.
1:30PM – 2.15 PM Track 1

**Topic - Insight to Outcomes - the real value of the Internet of Things (IoT): Leveraging data insights to drive business outcomes.**

Big Data is a big deal nowadays! It’s a buzz word that is getting a lot of attention, especially with the advent of the Internet of Things or the Internet of Everything. Data in of itself is just a collection of numbers. The ability to ingest large volumes of data, in near-real-time, turning that data into Analytics for easy consumption but more importantly taking the information and turning it into actionable insights that drive business process and business process improvements is the key to monetizing Big Data and IoT. In this session we will review a few customer use case examples of turning data into actionable insight which in turn is driving tangible business benefits and newer business models for customers.

**Speaker:** Venkat Vasan, Director NA - Extended Supply Chain and IoT CoE. SAP North America

Seasoned Professional with 25+ years' experience in Manufacturing and Manufacturing Processes, helping customers leverage technology and solutions to drive Lean, Sustainable, Adaptive and Optimized Operations throughout their Value Chain - driving higher Margins, Profitability and Growth for their Enterprise.

Specific Industry vertical domain expertise includes Consumer Goods, Food and Beverage, Life Sciences and Specialty Chemicals.

1:30PM – 2.15 PM Track 2

**Topic – Coupling Machine Learning and Optimization to Improve Pricing and Profits in Online Retail**

In this talk we will discuss how machine learning was used at a major South American retailer to provide better insight to customer’s willingness to pay compared to traditional demand elasticity models. In addition, optimization techniques were used to provide optimal strategies across categories rather than individual items.

**Speaker:** Derek Nelson, Senior Manager, Data Science Center of Excellence, Accenture

Derek Nelson is a Senior Manager in the Data Science Center of Excellence in Accenture. Derek was a partner at OPS Rules, a consulting firm specializing in operational analytics prior to OPS Rules being acquired by Accenture. His expertise lies in the creation and implementation of analytics solutions for operations and supply chain planning.

He is the co-author of Managerial Analytics and an adjunct professor in the Masters of Engineering Management program at Northwestern.
2:30PM – 3.15 PM Track 1

**Topic – IoT in Heavy Automotive Manufacturing Industry**

**Speaker:** Andy Minteer, Director, IoT Analytics and Machine Learning at Navistar Inc

At Navistar, Andy leads a team focused on developing Internet of Things analytics and insights in support of emerging telematics business areas, with a focus on applied Machine Learning techniques using Spark, Python, R, and SAS. Andy has held several leadership positions at Navistar.

Andy holds an MBA in Finance from Indianan University (Kelly School of Business) and BA from Indianan University, Bloomington.

2:30PM – 3.15 PM Track 2

**Topic – Use of next generation technologies such as BOTS, Mobility and Predictive Analytics to help reduce TAT times in the airline industry**

**Speaker:** Nitin Maheshwari, Vice President – Americas, Ramco Systems

Nitin Maheshwari heads the Aviation business in Americas, spearheading customer acquisitions, new product development to address current industry needs. He has successfully established best practices in material management at Airlines, OEMs and Aftermarket support and recently launched “Integrated Material Services” at Ramco. Prior to Ramco, Nitin worked as General Manager at AAR Corp, #1 MRO in North America, where he ran Expendable Parts group to provide 3PL/4PL services to internal MRO and Consignment program with a large airline. He has also worked with Price Waterhouse Coopers (PwC) Strategy & United Airlines in several strategy and supply chain roles. He is an expert in optimization and leveraging technology to solve business problems in aviation and other transportation industry.

Holds an MBA from Kellogg School Management and a MS. in Operations Research from University of Cincinnati. He is also has a Bachelor of Technology for Indian Institute of technology. Nitin is passionate about infusing technology to help create value for organizations.