2019 Breakout Sessions

Session 1 (9:40-10:40 am)

Predicting Patterns of Severe Injuries in Agribusiness Industries using Latent Class Analysis and Neural Networks
Fatemeh Davoudi, Assistant Professor of Aviation and Technology, San Jose State University

Ruan: Utilizing Technology and Analytics to Mitigate Risk
Dan Greteman, Vice President and Chief Information Officer, Ruan Transportation Management Systems
Allison Meiners, Director of Safety Programs, Ruan Transportation Management Systems

Ruan utilizes data collected from tractor and mobility technology (collision mitigation, lane departure, ELDs, speed gauge, cameras etc.) to analyze/react to risk warnings and coach safe driving techniques to our team members.

Practical Applications of Data Science in Government
Tom Schenk Jr., Director of Analytics, KPMG

Data science provides an opportunity to improve the quality of life for residents. Yet, leaders have often struggled to incorporate data-driven decisions into their daily workflow. This session will cover applied examples of how analytics can meaningfully improve government, ranging from informing policy to making direct improvements to operations and management. We will discuss how an incremental path can be built combining quick-wins and long-term planning so there is meaningful and manageable change. This session will also provide case studies on how advanced analytics can be used in daily work and how they can be adapted to meet agency-specific needs.

Ready, Set, KABOOM
Cheryl O’Hern, Marketing Strategist, Spin Markket

Marketing strategies and plans can either EXPLODE with positive results or crash and burn. Case studies and life lessons on marketing campaigns that have succeeded or failed. So how do you manage this data and information you collect from the successes and failures to grow your marketing campaigns and your bottom-line? Leave the presentation with knowledge on how to incorporate a variety of digital platforms, understanding the importance of your online presence and practical tips to better prepare how to use your data to achieve the campaign results outlined while being more efficient and effective.

Shine with Shiny: An Introduction to Interactive Data Visualization using RShiny
Haema Nilakanta and Sakshi Arya, School of Statistics, University of Minnesota Twin Cities

Haema is a Ph.D. candidate in the School of Statistics at the University of Minnesota. She earned a Bachelor of Science in mathematics from Iowa State University and a master’s degree in statistics from the University of Minnesota. Prior to joining the Ph.D. program, she worked with the Association for Women in Science and the George Washington University Biostatistics Center in Washington, D.C. Haema’s research interests include statistical network analysis, Markov chain Monte Carlo, sampling, and statistical applications to population research, public health, and public policy.

Sakshi is a Ph.D. candidate in the School of Statistics at the University of Minnesota. Her research interests include nonparametric methods, multi-armed bandits with covariates, sequential decision making, personalized medicine and network analysis. She received her bachelor’s degree in mathematics from Delhi University and master’s degree in mathematics from Tata Institute for Fundamental Research in Bangalore, India.
Additional Session 1 Presenters

Stuart Taylor, Vice President – Business Insights and Analytics, Kum & Go

Session 2 (11:00 am-noon)

GLMs vs Gradient Boosted Trees: A Practical Comparison for Insurance Data

Mark Jones, Director, PwC

Mark is an actuary and data scientist and leads PwC’s Actuarial Services Advanced Analytics practice in the United States. He has 24 years of experience working within the industry developing analytical solutions for underwriting, ratemaking, claims, reserving and marketing.

Transportation Big Data Analytics

Neal Hawkins, Associate Director, Institute for Transportation and Co-Director of the REACTOR Lab at Iowa State University

Skylar Knickerbocker, Research Engineer, Institute for Transportation, Iowa State University

This session will provide practical examples of big data analytics for surface transportation decision support. This work is being carried out at the Institute for Transportation at Iowa State University through the REACTOR Lab (Real Time Analytics of Transportation Data). The speakers will share the data analytics performed for the Iowa DOT in terms of both performance metrics and alerting as well as several machine learning applications. The information will touch on both enterprise and cloud computing activities as well as future capabilities being worked on by the team.

Enabling Government Analytics and Decision-Making: Technology and Data Discovery

Panel discussion with Tom Schenk Jr., Director of Analytics, KPMG; David Roederer, Director of the Iowa Department of Management; and Cassandra Dorius, Assistant Professor in the Department of Human Development and Family Studies, Iowa State University. Moderated by Erin Mullenix, Research Director at the Iowa League of Cities and Data Analyst at the Iowa State University Extension Office of Community & Economic Development.

A Journey through Industrial IoT

John McConeghey, Analytics and Reporting Manager, Pella Corporation

Matt Edwards, Senior Engineering Manager – Operations, Pella Corporation

Internet of Things (IoT) is a hot topic with a wide array of uses and applications. Attend this session to learn how two manufacturing professional explored this topic, convinced their leadership a proof of concept was an appropriate course of action, and the current status of their initiative. This will be an exploration of a project that is in progress and not yet complete. There are a lot of lessons to share so others can benefit from the experiences of the presenters.

Power to the People: Self-Service Analytics Has Arrived!

Saurabh Walke, Customer Success Engagement Manager, ThoughtSpot

Saurabh’s passion is to bring value to his clients. He currently works as an engagement manager at ThoughtSpot Inc. focusing on delivery and account management. As a trusted business advisor, his stakeholders leverage his insights and experience to achieve long term ROI. He has particularly been involved with a portfolio of clients ranging from pharma, retail, insurance, banking, manufacturing and telecom industries delivering a ‘search’ based analytic solution to his clients. His sole focus has been on driving user enablement, adoption, and user experience.

Additional Session 2 Presenters

Matthew Jackson, Director, SBDC National Information Clearinghouse
Session 3 (1:00-2:00 pm)

Optimizing an Insurance Company’s Stock Price Using Analytics

*Jeff Mulholland, FSA; Managing Director, PwC*

Jeff is a Managing Director in PwC’s New York office and leads Actuarial Service’s Insurance Financial Engineering team. He is responsible for advising both domestic and international clients on structured solutions, derivatives hedging, reinsurance and M&A transactions for the insurance and reinsurance industries, and has extensive experience in all of these areas.

Since 1991, he has worked for premier investment banks and hedge funds in the sector. More specifically, Jeff founded Goldman Sachs’ derivatives ALM business for the insurance and reinsurance industries, executing tens of billions of hedges while leading that business. His last position prior to PwC was running Societe Generale’s Cross Asset Solutions business for insurance and reinsurance companies in the Americas, and founding and leading its global longevity business. The longevity business received the 2014 award from Insurance Risk as the best bank in the longevity sector based upon successful executions.

The Many Uses of Manufacturing Data

*Jason Greer, Higher Standard Consulting*

*John Rapp, Rich Straw, Thomas Hotz, and Kelle Vox, Auto-Jet Muffler Corp*

What started as a simple question of “how do we price this single large order?” has turned into a whole new approach to sales, pricing, and production process design. Auto-Jet has been on a two year journey to use historic production time and cost to better estimate the true cost of each new sales proposal that goes out the door. In this presentation, we will tell the story of collecting data from the production floor and how that data changed the sales process and production process in many positive ways.

Big Data and AI in Supply Chain and Logistics

*Roger Lindau, Senior Executive Advisor for Supply Chain Management, Oracle*

*Omar Maher, Practice Lead for Machine Learning, ESRI*

Additional Session 3 Presenters

- Madison Lang, Practice Lead – AI and Machine Learning, Zirous
- Mahdi Moqri, Assistant Professor of Information Systems, Iowa State University
- David Roederer, Director, Iowa Department of Management

Session 4 (2:20-3:20 pm)

Machine Learning from Start to Finish with Scikit-Learn (Python)

*Cheng Nie, Assistant Professor of Information Systems, Iowa State University*

Cheng’s primary research interests are in sharing economy, sponsored search, and recommender systems. Before joining Iowa State University, Cheng earned his doctoral degree in management science from the University of Texas at Dallas.

Breaking through the Noise – Don’t Get Used by Your Data

Panel discussion with Matthew Jackson, Director, SBDC National Information Clearinghouse; Cheryl O’Hern, Marketing Strategist, Spin Markket; and Lisa Shimkat, State Director, America’s SBDC – Iowa.

Insurance Analytics Conversation

The insurance industry has become a focal point for new technologies and entrepreneurs seeking to digitize an industry that is very much anchored in paper and antiquated processes. Many local insurance companies and professionals are capitalizing on this movement in many ways, one of which is through involvement in the Global Insurance Accelerator (GIA). The GIA’s 90-day program provides a select group of InsurTech (insurance technology) start-ups with financing and mentorship opportunities. The mentorship flows both ways as the insurance professionals gain valuable insight on methods startups use to get their ideas off the ground. This session will feature presentations from some of the entrepreneurs making an impact on the industry. Moderated by Brian Hemesath, managing director of the Global Insurance Accelerator.
Transportation and Supply Chain Analytics Conversation
Panel discussion with Roger Lindau, Oracle; Omar Maher, ESRI; Allison Meiners, Ruan; and Scott Marler, Director – Operations Bureau, Iowa DOT.

Additional Session 4 Presenters
• Ruth Hummel, Academic Ambassador, JMP
• Chris Seeger, Professor, Department of Landscape Architecture; Extension Specialist in Landscape Architecture and Geospatial Technology at Iowa State University