

2023 Data Science & Analytics Executive Week - March 20-24

Detailed Schedule (Memorial Union 2nd Floor North) [Schedule.PDF](#)

Day 1 - Monday March 20, 2023

All Cohorts Together - Track	
9:00	Introduction to 2023 Executive Week - Schedule Overview - Expectations - Q & A (201ABC) <i>Dr. Grant Scott - Assistant Professor & Director Data Science & Analytics (DSA) MS Program</i> <i>Dr. Edward Mirielli - Associate Teaching Professor & Director Of Graduate Studies - Online DSA MS Program</i>
9:30	Ice Breaker Activities - Students meet Students <i>Grant Scott & Ed Mirielli</i>
10:00	Welcome and IDSI Overview (201ABC) Dr. Chi-Ren Shu <i>Paul K. and Dianee Shumaker Professor of Electrical Engineering and Computer Science Department; Director of MU Institute for Data Science and Informatics</i>
10:30	Industry Keynote - Dr. Wade Davis, Vice President, Computational Science - Moderna <i>Data Science in Biotech and Pharma through the Lens of a Former Academic.</i> Abstract: This talk is a reflection on a 20 year career where the first 11 years were spent at two different universities, and the next 9 years at three different pharma/biotech companies. The differences and similarities in roles, work style, and problem types between academia and industry will be covered. Practical advice for getting a job in industry beginning with interviewing to negotiating to promotions will be a focus, followed by a review of common organization structures, tool stacks, and management styles. Key skills and behaviors critical for success in industry will be discussed. Finally, various problem types commonly encountered in biotech will be presented. <i>Wade Davis is VP of Computational Science at Moderna. He holds a PhD in Statistics and completed an NIH Fellowship in Biomedical Informatics. Afterwards, he began his career in academia at Baylor University in the Department of Mathematics as an Assistant Professor. He then moved to the University of Missouri School of Medicine, where he was later a tenured Associate Professor. Wade has received research funding from dozens of federal research grants and served on the editorial board for the Journal of the American Statistical Association. Wade then joined AbbVie, a large pharmaceutical company, where he took roles of increasing responsibility and ultimately became Global Head of Bioinformatics and Computational Biology. Later, he was VP of Analytics and AI at Karius, a late-stage start-up using artificial intelligence for unbiased diagnosis of pathogens using microbial cell-free DNA. In his current position at Moderna, he leads wet and dry lab teams using computational methods to solve complex problems in R&D. Throughout his career, Wade and his teams have received many awards and he has given multiple conference keynotes. He has authored 100+ publications, with over 5,000 citations, with dozens of papers focused on using data science for target identification, predicting target-indication success, mechanism of action, and precision medicine.</i>
12:00	Lunch
1:00	Faculty Keynote - Dr. Christopher Wikle -Curators' Distinguished Professor and Chair of Statistics -University of Missouri <i>How Linear and Nonlinear Dimension Reduction Can Assist Spatio-Temporal Forecasting</i> Abstract: Spatio-temporal forecasting problems are ubiquitous in the environmental sciences. Often, data sets associated with these problems are very large in the spatial dimension. This talk shows some examples from my work whereby reducing the dimension using linear (e.g., principal component analysis) and nonlinear (e.g., Laplacian eigenmaps) dimension reduction can make forecasting spatio-temporal processes in an uncertainty quantification framework feasible and effective. Examples will include long-lead forecasting of El Nino/La Nina, settling patterns of migratory waterfowl, and wildfire front evolution. <i>Christopher K. Wikle is Curators' Distinguished Professor and Chair of Statistics at the University of Missouri (MU), with additional appointments in Soil, Environmental and Atmospheric Sciences and the Truman School of Public Affairs. His research interests are in spatial and spatio-temporal statistics applied to environmental, ecological, geophysical, agricultural, and federal survey applications, with particular interest in dynamics. His work has been concerned with formulating computationally efficient multilevel hierarchical Bayesian models motivated by scientific principles, with more recent work at the interface of deep neural models and statistical learning.</i>
2:00	Ice Breaker Results, Review, Recap <i>Grant Scott & Ed Mirielli</i>
2:30	Break
3:00	Closing Keynote -Ricky Meinhold, Assistant Coach - Pitching, University of Missouri Baseball <i>Data in Baseball: The "New" Revolution.</i>
4:30	End of Day

Day 2 - Tuesday March 21, 2023		
	Track 2nd Year Cohort	Track 1st Year Cohort
9:00	Capstone Team Work - (214CDE)	Linux Terminal - Command Line operations, paths & file manipulation -(201A)
9:30		Git Workshop and Group Development Exercise - (214A)
10:30	Break	
11:00	Concurrent Talks	
	Dr. Blaine Reeder - Associate Professor, MU Sinclair School of Nursing(201ABC)	Kathy Kiely - Professor, MU School of Journalism (214B)
	<i>Human-Centered Design Overview for Data Scientists</i> Abstract: Human-Centered Design (HCD) is a broad term that encompasses the practice of designing artifacts to accomplish specific goals by including people in the design process and considering the context of their activities and interactions. This presentation will provide an overview of HCD, key concepts and methods, and the relationship of HCD to data science. Differences in approach and data sample sizes for design and testing as compared to analysis of large data sets will be highlighted.	<i>"Big Data" and its unintended consequences-A Journalists View</i> Abstract: This presentation will discuss intersecting aspects of ethics and actions in journalism, Section 230 SCOTUS arguments, other practical vignettes of "Big Data" and its unintended consequences.
	Blaine Reeder, PhD is Associate Professor at the MU Sinclair School of Nursing with a joint appointment at MU Institute for Data Science and Informatics. His research focuses on applications of Human-Centered Design in informatics and data science for technology and independent aging, system and interface design for health applications, and sustainable technology research infrastructure.	Kathy Kiely is the Lee Hills Chair in Free-Press Studies from the MU School of Journalism
12:00	Lunch	
	Track 2nd Year Cohort	Track 1st Year Cohort
1:00	Technical Activities - (214CDE) WSL2 or MAC Jupyter Notebook/Data Downloading	Applied Machine Learning Class - Dr. Ilker Ersoy - (214A)
2:30	Break	
3:00	Concurrent Technical Activities Defensive Programming & Debugging -- Sue Brownawell - (214A) - 3:00-3:45 Containers + Gitpod-- Alex Hurt - (201ABC) - 3:00-3:45 & 3:45-4:30 Getting Started with Kubernetes--Anes Ouadou - (214CDE) - 3:45-4:30	
4:30	End Of Day	

Day 3 - Wednesday March 22, 2023		
	Track 2nd Year Cohort	Track 1st Year Cohort
9:00	Capstone Team Work - (214CDE)	Investigative Reporting & Data Carpentry Workshop - (214A) David Herzog - Professor, MU School of Journalism
9:30		
10:00		
10:30	Break	
11:00	Concurrent Talks	
	Dr. Li Zhao - Assistant Professor, MU Textile and Apparel Management (201ABC)	Dr. Baekkwon Park - Associate Professor, Truman School of Government & Public Affairs (214B)
	<i>Unleashing the Power of Fashion Data Analytics and AI: Transforming the Fashion Industry for the Future</i> Abstract: Fashion data analytics and AI technologies are revolutionizing the fashion industry by transforming every aspect of the global fashion supply chain. From assisting in design and product development to optimizing operations, improving customer experience, and forecasting fashion trends, new technologies are changing the game. By leveraging data analytics and AI, fashion and retail companies can gain a competitive edge and identify new growth opportunities.	<i>Augmenting Torture: Informed Textual Data Augmentation</i> Abstract: This work proposes a way to alleviate data scarcity issues through the development of an informed data augmentation algorithm for analyzing textual data.
	Dr. Zhao is a Director of Graduate Studies and an Assistant Professor at the University of Missouri in the Textile and Apparel Management Department and the Institute for Data Science & Informatics. Her research interest is to understand the impact of digital transformation in the global fashion supply chain through digital innovation and big data analytics.	Baekkwon Park is an associate professor in the Truman School of Government & Public Affairs and the Institute for Data Science & Informatics. His research interests include human rights, natural language processing, and computational social sciences.
12:00	Lunch	
	Track 2nd Year Cohort	Track 1st Year Cohort
1:00	Resume/Career Development-(214CDE) Laura Page Assistant Dean of Professional Development & Leadership MU Graduate School	Applied Machine Learning Class - Dr. Ilker Ersoy - (214A)
2:00	Alumni Connections - (214CDE)	
2:30	Break	
3:00	Github / Kaggle -- Public & Private Profile Building - (214CDE)	Case Study Project Ideas and Group Formation - Dr. Ed Mirielli (214A)
4:00	Graduation Logistics - (214CDE)	
4:30	End Of Day	

Day 4 - Thursday March 23, 2023		
	Track 2nd Year Cohort	Track 1st Year Cohort
	Capstone Work-in-Progress Presentations (214CDE)	Emphasis Areas/Administrative Discussion (214A) Classes/Registration Case Study Project Discussion Follow-up
9:00	Team04 - "Interest Rates & Inflation Impact on Employment Economics."	
9:30	Team05 - "Using NFL data to make predictions."	
10:00	Team07 - "Geographical Analysis of Health Effects of Nitrogen in Drinking Water in Missouri & Surrounding States."	
10:30	Break	
11:00	Faculty Panel Discussion: Perspectives on "Disciplinarity" and its Impact on Data Science & Analytics Education, Productivity, and Team Composition.	
12:00	Lunch	
	Capstone Work-in-Progress Presentations (201ABC)	
1:00	Team01 - ""Is Social Media an Untapped Resource in Building Sports Prediction Models?"	
1:30	Team02 - "The Usefulness of Social Media for Understanding Adverse Drug Reactions."	
2:00	Team03 - "Developing Data-Driven Resource Sharing for Missouri Law Enforcement Agencies."	
2:30	Team06 - "Is Winning the Best Medicine? An Analysis of the Economic Impact of SEC Football and Men's Basketball Program Performance."	
3:00	Break	
3:30	Campus/Cohort Photos, Interviews, Videos (Location TBA)	
4:30	End Of Day Shuttle to Hotel - 4:30pm Shuttle to Reception - 5:30pm	
6:00	Closing Reception Opening Remark: Jenni Hart, Dean of MU Graduate School Walsworth Family Columns Club, Memorial Stadium E Tower Dr, Columbia, MO 65203 Parking: Lot J East of Entrance	
8:30	Shuttle to Hotel	

Day 5 - Friday March 24, 2023	
DSA & Industry Advisory BoardTrack	
9:00	Morning Warm-up - Go buy Coffee, etc.
9:15	Introductions of DSA Cohorts, IAB, DSA Faculty
10:00	Networking Break
10:30	IAB Panel Discussion Generative "AI" has the potential of a significant disruptor, including media generation, writing, chat, mimicking human expertise, automatic programming, etc.
11:30	Networking Lunch
12:30	On-Campus Capstone WIP Project Presentations Team 01 - "Impacts of St. Louis Redlining" Team 02 - "Chicago Taxi Trips from O'Hara" Team 03 - "Yelp Personalized Recommendation System"
1:30	Break - Close of 2023 Executive Week
1:45	DSA/IAB Business Meeting & Wrap-up
2:30	End Of Day