

2024 SDSU Data Science Symposium Schedule

Monday, February 5, 2024				
Time	Pasque Room (255)	Dakota Room A/C (250)	Pheasant Room A/C (253)	Herold Crest 253 C
12:30-5:00 p.m.	Check-in/Registration Prairie Lounge			
1:00-5:00 p.m.	WORKSHOP 1 <i>Data Science for Actuaries Using R</i> Tatjana Milijakovic	WORKSHOP 2 <i>Docker for Data Science</i> Rami Krispin	WORKSHOP 3 <i>Coding with ChatGPT</i> Xijin Ge	WORKSHOP 4 <i>Block Chain Boot Camp</i> Timothy Li
6:00-6:30 p.m.	Banquet Oscar Larson Performing Arts Center			
6:30-8:00 p.m.	Social Time (cash bar)			
7:15-7:30 p.m.	Dinner			
7:30-8:30 p.m.	<i>Welcome, Kurt Cogswell, Head, Department of Mathematics and Statistics</i>			
7:30-8:30 p.m.	<i>Keynote: Evolution of FinTech: A Personal Journey, Timothy Li, Tech Entrepreneur, FinTech</i>			
Tuesday, February 6, 2024				
Time	Herold Crest (253C)	Dakota Room A/C (250)	Pasque Room (255)	
7:30 a.m.-noon	Check-in/Luggage Check Volstorff Lounge			
7:45-8:15 a.m.	Breakfast Volstorff B			
8:30-8:45 a.m.	<i>Opening Session Welcome and Introduction, Dr. Sanjeev Kumar, Dean, Jerome J. Lohr College of Engineering Volstorff B</i>			
8:45-9:45 a.m.	<i>Keynote: The Role of the Data Scientist in the Era of LLM and GenAI, Rami Krispin Volstorff B</i>			
9:50-10:50 a.m.	Session 1 Chair: Thomas Brandenburger Fighting the Good Fraud Fight Adam J. Elliott, Kevari Commercial Finance Account Management Scorecards — Risk & Propensity Sebastian Sowada & Ed Krueger, Channel Partners	Session 2 Health Applications Chair: Xijin Ge Transforming Maternal Care: Building a Comprehensive Database for Better Outcomes in South Dakota Christine Wey Hockett, Avera Research Institute Development of a Machine Learning and Computational Method to Identify Geographic and Racial Disparities in End-stage Kidney Disease Brandon Varilek, South Dakota State University	Session 3 Mathematical Machine Learning Chair: Michael Puthawala Characterizing Rational Transplant Program Response to Outcome-based Regulation Saumya Sinha, University of Minnesota Into the Cat-VRS: Cracking a Clinical Conundrum Before It's Too Late Daniel Puthawala, Wagner Lab, Nationwide Childrens Hospital Deep Learning Strategy for Solving Physics-based Bayesian Inference Problems Deep Ray, University of Maryland	
10:50-11:00 a.m.	Networking Break Exhibitors Volstorff A			
11:00 a.m.-noon	Session 4 Finance Chair: Thomas Brandenburger Pprofet – A Library for Fst/Stable Credit Scorecards Krystal Wang, Channel Partners Thomas Brandenburger, South Dakota State University	Session 5 Machine Learning Applications in Finance Chair: Gerald Wang Unleashing the Power of ChatGPT in Finance Research: Opportunities and Challenges Zifeng Feng, University of Texas at El Paso An Empirical Study of One-Step Ahead Stock Price Prediction Using Deep Learning Model and High Dimensional Method Feiyang Xu, South Dakota State University Machine Learning for Stock Return Prediction: Transformers or Simple Neural Networks Junze Sun and Zhiguang Wang, South Dakota State University	Session 6 Models for Unsupervised Learning Chair: Yana Melnykov The Size-biased Lognormal Mixture with the Entropy Regularized Algorithm Tatjana Milijakovic, Miami University Model-based Clustering Analysis of the Spatial-Temporal and Intensity Patterns of Tornadoes Rong Zheng, Western Illinois University On Contaminated Transformation Mixture Models Yana Melnykov, University of Alabama	
noon-1:00 p.m.	Lunch Invited Speaker: Pathways to Decarbonization, Brian Fladger, MAN Energy Solutions Volstorff B			
1:00-2:00 p.m.	Poster Session Student Poster Competition Volstorff A			
1:00-2:30 p.m.	Job Fair/Recruiting Exhibitors Volstorff B			
2:30-3:30 p.m.	Session 7 Student Speed Presentations Chair: Prince Agyapong Hierarchical Clustering of Small Arms Propellants with Pseudo-Metrics Janean Hanka, South Dakota State University Studying Algorithmic Bias in Forensic Source Identification Problems Isaac Gbene, South Dakota State University Clustering of Synthetic Opioid Death Rates and Associated Factors in the U.S. Jason Hasse, South Dakota State University A Local False Discovery Rate based Assessment of Forensic and Biometric Matching System Capacity Clarissa Giefer, South Dakota State University	Session 8 Applications of Machine Learning Chair: Nathan Meyer Robust CNN-based Automatic Modulation Classification Mark Arinaitwe, North Dakota State University Machine Learning based Behavior of Non-OPEC Global Supply in Crude Oil Price Determination Mofe Jeje, North Dakota State University Clustering Singular and Non-Singular Covariance Matrices for Classification. Andrew Simpson, South Dakota State University	Session 9 Metric and Manifold Learning Chair: Christopher Saunders Iterative Estimation of Coefficients for Generalized Linear Models on Pairwise Scores Cami Fuglsby, Augustana University Improved Geolocation of Satellite Measurements Using Bayesian Hierarchical Models Paul May, South Dakota School of Mines & Technology The Embedding Gap: When Are Manifold Close? Michael Puthawala, South Dakota State University	
3:30-4:15 p.m.	Networking Break Exhibitors SDSU Ice Cream, Volstorff A			
4:15-4:30 p.m.	Closing Session Poster Winners Announced, Thomas Brandenburger Volstorff B			

Poster Presentations

Prince Agyapong, Meta-analysis for Studying Racial Disparities in All-Cause Mortality for Persons with End-Stage Kidney Disease

Sayed Asaduzzaman, Multimode Point Spectroscopy for food authentication

Dylan Borchert, Probabilistic foundations for the use of the logistic regression Bayes Factor in Forensic Source Identification

Eleanor Cain, Principal Component Analysis with Application to Credit Card Data

Isaac Gbene, Studying Algorithmic Bias in Forensic Source Identification Problems

Clarissa Giefer, A Local False Discovery Rate Based Assessment of Forensic and Biometric Matching System Capacity

Janean Hanka, Hierarchical Clustering of Small Arms Propellants with Pseudo-Metrics

Jason Hasse, Clustering of Synthetic Opioid Death Rates and Associated Factors in the U.S.

Benjamin Honner, Deep Neural Network for Survival Analysis of End-Stage Kidney Disease

Nathan Meyer, Proportional Hazards Mixture Cure Models for End Stage Kidney Disease

Kayanna Morgan, ML Methods Used in the Player Ranking System for Team Sports

Shree Krishna Nyaupane, Survival Analysis of Tree Species: Investigating Mycorrhizal Types, Soil Characteristics, and Environmental Factors.

Hasin Rehana, Leveraging Large Language Models for Extracting Protein-Protein Interactions from Biomedical Corpora

Mary Row, Predicting Crop Yield Using Remote Sensing Data

Annika Spors, Spatio-Temporal Change of Support Applied to South Dakota Area Deprivation Index Rankings

FNU Tabish, Buckling Behavior of Thin Wall Stiffened Cylindrical Shells Through ML Techniques

Xeng Yang, Diabetes Health Indicator Using Machine Learning Techniques