

# 2025 SDSU Data Science Symposium Schedule

## Thursday, February 6

Time	Pasque 255	Dakota Room 250 A/C	Pheasant Room 253 A/B
12:30 pm - 5:00 pm	Check-in/Registration (Location : Prairie Lounge)		
1:00 -5:00 pm	<p><b>Workshop 1</b>  <i>Building Interdisciplinary applications using Large Language Models</i>                      Bishnu Sarker - Meharry Medical College</p>	<p><b>Workshop 2</b>  <i>Agentic AI Systems with Advanced Capabilitie</i>                      David Zeng - DSU</p>	<p><b>Workshop 3</b>  <i>Introduction to Quarto</i>                      Xijin Ge - SDSU</p>
	<b><u>Banquet (McCrory Gardens)</u></b>		
6:00 - 8:30 pm	Social time (Cash bar)		
6:30 - 7:15 pm	Dinner		
7:15 - 7:30pm	<p><b>Welcome</b>  <i>Dr. Eun Heui Kim - Department Head, Mathematics and Statistics</i></p>		
7:30 - 8:30 pm	<p><b>Keynote</b>  <i>The Evolution of Fraud: A Personal Journey</i>                      Adam Elliott - President &amp; Founder, Kevari</p>		

## 2025 SDSU Data Science Symposium Schedule

Friday, February 7

Time	Jacks' Place (Room 050)	Dakota A & C (Room 250)	Pasque (Room 255)
7:30 - noon	Check-in / Luggage Check (Location: Volstorff Lounge)		
7:45 - 8:25 am	Breakfast (Location: Volstorff B)		
8:30-8:45 am	<b>Opening Session</b> Welcome and Introduction: Dr. Sanjeev Kumar -Dean of JJ Lohr College of Engineering (Location: Volstorff B)		
8:50-9:50 am	Session 1: Finance Chair: Dr. Thomas Brandenburger - SDSU  <i>Model Risk and Common Pitfalls - Lessons from Model Risk Management</i> Austin Hanson - Navy Federal Credit Union	Session 2: Health applications Chair: Dr. Xijin Ge - SDSU  <i>Applied Model Building and Implementation: Predicting Acute Care Utilization Following Chemotherapy</i> McKenna Perrin - Avera Research Institute <i>Unveiling clusters in high-dimensional cancer data: Predicting Cancer of Unknown Primary</i> Padmapriya Swaminathan - Avera Research Institute <i>Creating a User-friendly Shiny App for Reproducible Two-sample Mendelian Randomization Studies</i>	Session 3: The Many Faces of Data Science in Healthcare Chair: Dr. Michael Puthawala - SDSU  <i>The Many Faces of Data Science in Healthcare</i> Christine Puthawala - Boston Children's Hospital & Boston Medical Center Amrita Sinha - Boston Children's Hospital Erik Westlund - John Hopkins
9:50-10:00 am	Networking break / Exhibitors (Location: Volstorff A)		
10:00-11:00 am	<b>Keynote: The New Frontier in Medicine: Bridging Clinical Care and Data Science</b> Speaker: Benson Hsu (Location: Volstorff B)		
11:00 am-12:00 noon	Session 4: ML and LLMs with applications Chair: Dr. Thomas Brandenburger - SDSU  <i>Model Governance and Key Risk Indicators of Model Performance</i> Edward Krueger and Josh Moore - Channel Partners Capital <i>Harnessing Local LLMs: A Practical Guide for Secure Data Science</i> Daniel Burkhalter - CTO - Oreditus	Session 5: Health Care Applications Chair: Dr. Christine Hockett - Avera and Dr. Brandon Varilek - UNMC  <i>Challenges and Opportunities of Combining Clinical Datasets with Social Determinants of Health Datasets in Machine Learning: Application to Determining the Risk of Mortality in End Stage Kidney Disease</i> Patti Brooks - Dakota State University <i>Assessing Heterogeneity in Maternal-Child Outcomes: Insights from Machine Learning</i> Corneliu Bolbocean - University of Arkansas	Session 6: Forensic Science Applications Chair: Dr. Christopher Saunders - SDSU  <i>Specific Source Machine Learning Score-based Likelihood Ratios for Forensic Evidence</i> Danica Ommen - Iowa State University <i>Bone Surface Modification Dataset Synthesis for Computer Vision Models Using LoRA Tuned Latent Diffusion Models</i> Jason Mixon and Austin O'Brien - Dakota State University <i>Navigating the Stratosphere</i> Ron Morfitt and Russ Van Der Werff, Aerostar
12:00 - 1:00 pm	Lunch (Volstorff B) Panel discussion: Advanced Analytics and AI Panel moderator : Steve Cross		
1:00 - 2:30 pm	Poster session Student poster competition (Location: Volstorff A)		
1:00 - 2:30 pm	Job Fair/ Recruiting Exhibitors (Location: Volstorff A)		
2:30 - 3:30 pm	Session 7: Applications Chair: Addy Smith  <i>Using Machine Learning to Predict Attrition in a Federal Nutrition Education Program</i> Andrea Leschewski -SDSU <i>Investigating application of deep neural networks in intrusion detection system design</i> Mofe Jeje - NDSU <i>Modeling Time to Recovery from Neonatal Hypothermia Among Neonates Admitted to Pawe Generalized Hospital, Metekel Zone, Ethiopia</i> Aboma Tolessa	Session 8: ML and Applications Chair: Isaac Gbene  <i>Knowledge Graph Embedding Models for Drug Repurposing</i> Bishnu Sarker - Meharry Medical College  <i>When Machine Learning Meets Wireless Networking and Mobile Computing: Observations and Algorithm Design</i> Jun Huang - SDSU	Session 9:Advances in Multivariate Analysis of Complex Data Chair: Dr. Yana Melnykov  <i>Recent developments in the application of pairwise overlap</i> Volodymyr Melnykov - University of Alabama <i>Transformation Discriminant Analysis</i> Yana Melnykov - University of Alabama <i>Spatial-temporal models for forest inventory data</i> Paul May - South Dakota School of Mines & Technology
3:30 - 4:30 pm	<b>Closing Session (Location: Volstorff B)</b> Chair: Thomas Brandenburger <i>Portraying the Different Ways Consumers Can Arrive at the Same FICO® Score Value</i> Gerald Fahner - FICO Winners of poster announcement		
4:30 - 5:00 pm	Networking Break / Exhibitors (Location: Volstorff A) - SDSU ICECREAM		

Friday, Feb 7, 2025

Poster presentations - Volstorff A

No	First name	Last name	Title
1	Michael	Abalo	Modeling Forage Quantity and Quality Using Machine Learning Models and Remote Sensing Data.
2	Kamal	Albousafi	Filters for Forecasting Crop Health: Analyzing and Projecting the Temporal Evolution of Landsat NDVI Data using Dynamic Linear Models and the Kalman
3	Md Iftekhar	Amin	Predicting Football Player's Salary
4	Andy	Behrens	Intelligent Clinical Decision Support Systems Research Plan
5	Muhammad	Bhutta	Enhancing Crop Yield through Efficient Anomaly Detection Using Transfer Learning and Multispectral Satellite Imagery
6	Dylan	Borchert	Estimation of parameters of the truncated normal distribution with unknown bounds
7	Emma	Brookman	Association between water pollution and other environmental factor exposures with preterm births and potential subsequent birth defects.
8	Tapiwa	Chinodakufa	Generative AI for Synthetic Data Creation: Building Mastery-Focused Educational Datasets
9	Isaac	Gbene	Studying bias in diagnostic and predictive models in AI-Driven Healthcare Systems: A focus on bias detection, mitigation, and ethical considerations
10	Hillson	Ghimire	Wheat Spike and Spikelet Detection on Close-range Digital Imagery using Deep Learning
11	Clarissa	Giefer	Global Distributional Assumptions for a Local False Discovery Rate-Based Assessment of Forensic and Biometric Matching System Capacity
12	Matthew	Halberg	Leveraging Large Language Models for Automated Extraction of Information from Provider Notes
13	Janean	Hanka	Implications of assuming common within-source distributions and their effect on evidence interpretation
14	Jason	Hasse	A Deep Cox Mixture Model Approach to End-Stage Kidney Disease
15	Catherine	Hoier	AI Super Resolution for Structural Damage Detection From Low Quality Sources
16	Nnaemeka	Igwe	Machine Learning and SHAP Interpretability for Chronic Disease Understanding
17	Axel	Irianni	Probing the Stability of Designed Protein
18	Etonam	Kunu	Bayesian Machine Learning Approach for Corn Yield Prediction Using Satellite Imagery and Topographic Data

Friday, Feb 7, 2025

Poster presentations - Volstorff A

No	First name	Last name	Title
19	Jing	Li	Transformation and Mixture Discriminant Analysis
20	Nathan	Meyer	Development and Validation of Mortality Risk Scores for Persons with End-Stage Kidney Disease
21	Jason	Mixon	Computer Vision Dataset Synthesis Using LoRA Tuned Latent Diffusion Models
22	Edwin Kutsushi	Mutimba	Modeling Area Deprivation Index using Non-Gaussian Fixed Rank Kriging
23	Quyên	Nguyen	Analyzing Heart Disease Risk Factors Using a Logistic Regression Approach
24	Sai Mounika	Chintalpudi	AI and Radiology: Exploring People, Process, and Technology through a Meta-Analysis
25	Vahini	Atluri	Integrating Artificial Intelligence into Radiology: A Meta-Analysis of Educational Interventions and Technological Trends
26	Shree Krishna	Nyaupane	Downscaling and Predicting Downward Shortwave Radiation: A Case Study Using Ambient Weather and Open-Meteo Data
27	Michael	Olabode	Evaluating the Effectiveness of OPTN Regulations in Organ Transplantation
28	Sayantica	Pattanayak	Predicting Soil Temperature at different depths using a Time Series Model
29	Cole	Patten	Deep Learning for Forensic Identification of Source
30	Jesto	Peter	Forecasting and Downscaling Solar Irradiance Using Transformers
31	Mary	Row	Addressing Missing Data in SDOH: Imputation and Translation
32	Andrew	Simpson	Covariance Clustering on Skewed Data
33	Addy	Smith	Prediction of All-Cause Mortality in End-Stage Kidney Disease Patients Using Social Determinants of Health: A Machine Learning Framework