

Artificial Intelligence/Machine Learning Networking Event

Tuesday, April 8, 2025 at 1:00 to 4:30 pm

Room 120, Proteomics Building, 174 Frelinghuysen Road, Piscataway (Busch Campus)

1:00 pm

Welcome

- *Stephen K. Burley, Interim Director, RAD Collaboratory and University Professor and Henry Rutgers Chair, Chemistry and Chemical Biology, School of Arts and Sciences*

1:15 pm

Lightning Talks from Rutgers Researchers Focused on the Development and Application of AI/ML Tools

1. Single-Cell Transcriptomic Cell Type Annotation Using AI for Spinal Cord Injury Study
Li Cai, Professor, Biomedical Engineering, School of Engineering
2. New Jersey AI Hub and Rethinking Computer Science
Ananda "Andy" Gunawardena, Teaching Professor, Computer Science, School of Arts and Sciences
3. Pay Attention - Classical Statistical Models Got Interesting
Sijian Wang, Professor, Statistics, School of Arts and Sciences
4. The Last Mile in Remote Sensing Poverty Prediction
Woojin Jung, Assistant Professor, School of Social Work
5. Robot Learning, Perception and Planning @ Rutgers CS
Kostas Bekris, Professor, Computer Science, School of Arts and Sciences
6. Evolution of Human - Chatbot Interactions
Jim Samuel, Associate Professor of Practice, Informatics, E. J. Bloustein School of Planning and Public Policy
7. Applying AI/ML methods to identify controls on the occurrence and organization of precipitating deep convection and extreme rainfall in the tropics
Benjamin Lintner, Professor, Environmental Sciences, School of Environmental and Biological Sciences
8. Machine Learning Approaches to Climate Data Bias Correction and Downscaling
Lili Xia, Assistant Research Professor, Environmental Sciences, School of Environmental and Biological Sciences and Zhao Zhang, Assistant Professor, Electrical and Computer Engineering, School of Engineering
9. Responsible AI for Health and Wellness
Vivek Singh, Associate Professor, Library and Information Science, School of Communication and Information
10. A Machine Learning Approach to Predicting In-Hospital Mortality Following Traumatic Injury: Model Development and Validation
Hajer Ali, Graduate student, Biomedical Engineering, School of Engineering
11. Surgical Site Infections (SSI) Prediction, Early Detection and Management Model
Divya Kewalramani, Postdoctoral Associate, Surgery, Robert Wood Johnson Medical School
12. Deep learning from deep mutagenesis: data-driven computational design of protein binding and catalytic selectivity
Sagar Khare, Professor, Institute for Quantitative Biomedicine, School of Arts and Sciences

The presentations from today's event are available on the RAD Collaboratory's Past Event Resources webpage:

<https://radcollaboratory.rutgers.edu/news/past-event-resources/>



13. The Role of AI and ML in Precision Medicine: A Case Study of Brittle Bone Disease
Emma Larson, Graduate student, Chemistry and Health Informatics, School of Health Professions
14. IntelliGenes: AI/ML pipeline for biomarker discovery and predictive analysis
Zeeshan Ahmed, Assistant Professor, Institute for Health, Health Care Policy and Aging Research, Robert Wood Johnson Medical School
15. Interactive, personalized summarization of cancer diagnostics data using large language models
Subhajyoti De, Associate Professor, Systems Biology, Rutgers Cancer Institute
16. Intersection of the RCSB Protein Data Bank with Artificial Intelligence/Machine Learning
Stephen Burley, Director, RCSB Protein Data Bank, Institute for Quantitative Biomedicine
17. Advancing AI tools for drug discovery and enzyme design
Darrin York, Distinguished Professor, Chemistry and Chemical Biology, Institute for Quantitative Biomedicine, School of Arts and Sciences
18. Objective Metrics for AI Assurance
Lazaros Gallos, Research Professor, Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), School of Arts and Sciences
19. Deep Learning for Automated Classification of Corrosion Failures in Potable Water Infrastructure
Siddhartha Roy, Assistant Professor, Environmental Sciences, School of Environmental and Biological Sciences
20. AI/ML-driven Annotation for Cellular Imaging
Wei Dai, Associate Professor, Cell Biology and Neuroscience, Institute for Quantitative Biomedicine, School of Arts and Sciences
21. Fundamental Physics: An Unparalleled Sandbox for AI and Modern Machine Learning
David Shih, Professor, Physics and Astronomy, School of Arts and Sciences
22. From the bottom up: Predicting 2D quantum materials to twist and stack
Jed Pixley, Associate Professor, Physics and Astronomy, School of Arts and Sciences
23. Improved Explainability and Robustness of Foundation Models: Principled Methodology to Incorporate Domain Knowledge
Dimitris Metaxas, Board of Governors Professor, Computer Science, School of Arts and Sciences

3:10 pm Briefings on University, Regional, and National Cyberinfrastructure Supporting AI/ML Research and Training Opportunities

24. OSC/RAD summer course: Basic Statistical Analysis Methods for Biomedical Researchers
Minge Xie, Distinguished Professor, Statistics, School of Arts and Sciences
25. OARC Resources for Researchers in Today's Digital Age
Travis Williams, Senior Scientist, Office of Advanced Research Computing (OARC)
26. New Jersey Big Data Alliance (NJBDA) & Journal of Big Data and Artificial Intelligence (JBDAI)
Jim Samuel, Associate Professor of Practice, Informatics, E. J. Bloustein School of Planning and Public Policy

3:25 pm Summary of Federal, State, and Private Funding Mechanisms for RAD Partnerships

3:30-4:30 pm Networking Reception

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