The REU Symposium 2024 *WorkshopChairs: Xuechen Zhang, Xinghui Zhao, Xiaokun Yang, Matthias Gobbert, and Jianwu Wang*		
Time	**Title**	**Presenter/Author**
9:00-10:00	**Opening remark and key notes**	
	Session 1: Bug patterns, detections, and code repair	
10:00-10:12	TransBug: Transformer-Assisted Bug Detection and Diagnosis in Deep Neural Networks	Abdul Haq Ayantayo, Johnson Chen, Muhammad Anas Raza, and Mohammad Wardat
10:12-10:24	A Study of PyTorch Bug Patterns and Memory-Related Challenges	Brian Yu, Rubayet Rahman Rongon, Chen Cao, and Xuechen Zhang
10:24-10:36	RAGFix: Enhancing LLM Code Repair Using RAG and Stack Overflow Posts	Elijah Mansur, Johnson Chen, Muhammad Anas Raza, and Mohammad Wardat
10:36-10:48	A Comparative Analysis between AI Generated Code and Human Written Code: A Preliminary Study	Abhi Patel, Kazi Zakia Sultana, and Bharath Samanthula
	Session 2: Medical applications	
11:00-11:12	Improving Gamma Imaging in Proton Therapy by Sanitizing Compton Camera Simulated Patient Data using Neural Networks through the BRIDE Pipeline	Michael Chen, Julian Hodge, Peter Jin, Ella Protz, Elizabeth Wong, Ruth Obe, Ehsan Shakeri, Mostafa Cham, Matthias Gobbert, Carlos Barajas, Vijay Sharma, Sina Mossahebi, Lei Ren, Stephen Peterson, and Jerimy Polf
11:12-11:24	Robust and Adaptive AI Models for Medication Usage Forecasting Using ICD-9/10 Code	Jonathan Li
11:24-11:36	Predicting Cardiac Complications of Myocardial Infarction Patients Using Machine Learning	Shriyansh Baidya and Vibhuti Gupta
11:36-11:48	Towards More Robust and Scalable Deep Learning Systems for Medical Image Analysis	Akshaj Yenumala, Xinyue Zhang, and Dan Lo
11:48-12:00	Importance Sampling to Learn Vasopressor Dosage to Optimize Patient Mortality in an Interpretable Manner	Anshul Rastogi
	Session 3: Agriculture and environment I	
1:00-1:12	Visual Identification of Oysters Using Machine Learning	Nikolai Vukov, Joshua Essandoh, Michael Straus, Yuanwei Jin, and Enyue Lu
1:12-1:24	Energy Prediction for Automobile Air Conditioning Systems (SP09203)	Adel Tazhibi, Nathan Dong, Kavyalata Kothari, and Taehyung Wang
1:24-1:36	Data-Driven Modeling of Wind Farm Power and Revenue Generation	Ivan Karp and Chris Qin
	Session 4: Security and hardware	
2:00-2:12	Biometric Authentication via Electrocardiogram Traces	Naomi Argaw, Diwas Pandey, and Scott Wallace
2:12-2:24	Fly-ABAC: Attribute Based Access Control for the Navigation of Unmanned Aerial Vehicles	Wynter Jaap, Victoria Lee, Sai Avinash Vagicherla, and Carlos Rubio-Medrano
2:24-2:36	Hardware Generation on Trigonometric Functions	Paul Wong, Dania Mosuli, Xuechen Zhang, and Xiaokun Yang
	Session 5: LLMs	
3:00-3:12	Do LLMs Understand Ambiguity in Text? A Case Study in Open-world Question Answering	Aryan Keluskar, Amrita Bhattacharjee, and Huan Liu

3:12-3:24	An LLM-Based Approach to Real-Time Ransomware Detection for Industrial Control Systems	Genova Mongalo and A S M Touhidul Hasan
3:24-3:36	Utilizing Large Language Models (LLMs) in Data Analysis Pipeline for Digital Phenotyping: Description, Prediction, and Visualization	Derek Nissen, Tianyang Yu, Reyva Babtista, and Yi Shang
	Session 6: Agriculture and environment II	
4:00-4:12	Ecosystem-Based Wildfire Risk Prediction with Machine Learning	Eric Alexander Schmitt, Evan Joseph Zaremba, Neha Ananthavaram, Li Liu, Mario Giraldo, and Xunfei Jiang
4:12-4:24	Data-Driven Initial Guess Selection for Numerical Weather Prediction Solvers	David Millard, Arielle Carr, and Stephane Gaudreault
4:24-4:36	OSDA-ST: Advancing Open Set Domain Adaptation Through Selective Thresholding in Remote Sensing	Andy Wang, Rahul Gomes, and Papia F. Rozario
4:45-5:00	**Closing Remarks**	