The Langston Lab is pleased to announce that Haoran Niu successfully defended his doctoral dissertation on June 13th, 2023. This document, titled "Anomaly Detection in Complex Health Information Technology Systems," presented innovative approaches and applications in anomaly detection using Electronic Health Records. His research addressed the intricacies of Health Information Technology Systems and emphasized the importance of patient data privacy and security. Haoran's notable achievements include the integration of machine learning and graph theory in discrete sequence data and time-series point data, resulting in novel methodologies for effective anomaly detection. The doctoral committee, led by Dr. Michael A. Langston (dissertation advisor and chair), consisted of esteemed members including Dr. Olufemi Omitaomu, Dr. Catherine Schuman, and Dr. David Icove.

Haoran was admitted to the Computer Engineering PhD program at the University of Tennessee in 2017. Since then he has served as both a graduate teaching assistant and a graduate research assistant. From 2019 to 2023 he also worked as a visiting scientist at Oak Ridge National Laboratory (ORNL), collaborating with the research team led by Dr. Omitaomu.

Haoran has now assumed a postdoctoral research position in the Computational Sciences and Engineering Division at ORNL. There his efforts will focus on a variety of topics, including system reliability, predictive analytics, and data-driven decision making. He will also contribute to the development of innovative solutions and strategies that enhance the efficiency, sustainability, and resilience of urban environments.