Editorial

We are pleased to present the latest issue of the seventeenth volume of the ***Journal of Networking Technology.*** This issue features three compelling research articles that critically examine the predictive capabilities of established network and security metrics.

The issue opens with ***"Evaluating the Predictive Power of Network Performance and Encryption Metrics on Transmission Success in ASEAN Edge Systems."*** The authors survey recent advances in secure, intelligent edge networking, focusing on the interplay between quality of service (QoS) metrics, encryption mechanisms, and transmission reliability. Through an empirical evaluation of the Cross Border Edge Data dataset, they quantify the joint predictive power of these variables. Utilizing correlation analysis, multi-model regression, permutation importance, and stratified conditional analysis, the study reveals a striking conclusion: the available predictors exhibit near-zero explanatory power for Transmission Success Rate. These findings clarify the practical limitations of current quality of service and security features in predicting transmission outcomes across large-scale, cross-border edge deployments.

The second article, ***"Static Mapping and Discrete-Event Dominance in a PLC Industrial Control Loop: Correlation, Multivariable Regression, and Residual Analysis of a High-Resolution Process Dataset,"*** investigates dominant input output relationships within a closed-loop PLC system. Analysing a high resolution dataset of 100,000 time stamped observations through a sequential pipeline comprising bivariate correlation, ordinary least squares (OLS) regression, random forest modelling, and dynamic ARX extensions the authors perform rigorous residual diagnostics. Their findings demonstrate that the control loop operates primarily as a near deterministic static mapping, rather than a dynamic system with memory.

Finally, ***"Classical Network Metrics Fail to Predict Continuous Transmission Reliability in Federated Secure Environments"*** examines the predictive utility of five classical network metrics for continuous transmission reliability and categorical transmission status. Using a 13,000-record Network Transmission Dataset, the authors apply a comprehensive suite of correlation, regression (OLS, Random Forest, Gradient Boosting), and classification models. The results conclusively demonstrate that classical network metrics are fundamentally insufficient for predicting continuous transmission reliability in federated secure environments.

We hope this issue provides valuable insights into the evolving landscape of networking technology, and we look forward to publishing further cutting-edge research in future volumes.

Editors