Editorial

We are pleased to present the third issue of this volume of the ***Journal of Networking Technology*,** featuring three compelling studies that advance the state of the art in network analytics, intelligent routing, and vehicular communications.

The opening paper, "**Graph Representation Learning and Structural Analysis of Large-Scale Organisational Email Communication Networks,"** introduces a comprehensive graph representation learning framework tailored for large-scale enterprise email ecosystems. The authors integrate deep graph neural networks (GNNs), graph autoencoders, and explainable artificial intelligence (XAI) within a hierarchical encoder decoder architecture, specifically employing the Adversarially Regularized Graph Autoencoder (ARGA). Their model excels at capturing both local connectivity and global topological dependencies. To enhance interpretability, the framework incorporates multiple XAI modules including GNN Explainer, GraphSHAP, and attention weight visualization to decode latent representations, revealing critical communication hubs, influential subgraphs, and hidden community structures. The findings robustly demonstrate the power of adversarially regularized probabilistic models in unraveling the complex, evolving dynamics of sparse, scale free enterprise networks, thereby laying a foundation for trustworthy AI applications in organizational decision support and behavioral analysis.

The second paper, "**QoE-Aware Energy-Efficient Routing Decision Analysis in 5G VANETs Using Explainable Machine Learning**," presents an explainable machine learning approach for analyzing and predicting quality-of-experience (QoE) aware, energy efficient routing decisions. Leveraging a simulated dataset of 10,000 routing instances that span network, multimedia, and energy related parameters, the authors employ a Random Forest classifier with balanced class weighting. Their model achieves near perfect predictive performance 99.9% accuracy, 99.56% balanced accuracy, and a Matthews Correlation Coefficient of 0.998. The results indicate that optimal routing arises from simultaneously optimizing multiple performance dimensions, with delay and perceptual quality exerting greater influence on user satisfaction than packet loss.

The final paper, "**A Comprehensive Multicollinearity Analysis and Ridge-Based Classification of Dynamic Routing Decisions in Internet of Vehicles (IoV) Networks,"** proposes a robust framework that combines extensive multicollinearity diagnostics with a Ridge Classifier to improve routing decision-making in dynamic IoV environments. Using a synthetic dataset of 4,000 instances with 28 numerical features, the authors conduct rigorous diagnostics including Variance Inflation Factor (VIF), condition indices, and Belsley analysis which confirm severe feature interdependencies. Their results show that ridge regularization effectively mitigates the numerical instability introduced by multicollinearity, all while preserving critical vehicular network performance metrics.

We look forward to bringing you more cutting-edge research in our next issue.

Editors