Editorial

We are pleased to present the final issue of ***Progress in Computing Applications*** for 2026, featuring three studies that span fraud analytics, anomaly detection in next-generation networks, and large language model optimization.

The opening paper, ***"Device Security Signals and Transaction Amounts as Weak Predictors of Fraud: An Empirical Analysis of a Financial Transaction Dataset,"*** reexamines the utility of static security indicators in fraud detection. Using a quantitative cross sectional design, the authors analyze the Financial Transaction Intelligence Dataset 2026 encompassing 10,000 transactions across 1,500 devices and 773 customers. Their results show that conventional device level flags, such as trusted status, root or jailbreak state, and biometric enablement, have no statistically meaningful association with actual fraud outcomes in this sample.

The second paper, ***"Weather-Aware Anomaly Detection in Cloud-Assisted THz-IoT Networks: A Comparative Study of Isolation Forest and Deep Autoencoder,"*** presents a rigorous empirical comparison of two anomaly detection frameworks under adverse atmospheric conditions. The Deep Autoencoder consistently outperforms Isolation Forest across ROC AUC, Average Precision, and F1-score. These results underscore the value of nonlinear representation learning in capturing subtle, multifactor degradations, positioning the autoencoder as the preferred tool for proactive fault diagnosis and predictive management in future cloud-assisted IoT infrastructures.

The final contribution, ***"A Systematic Taxonomy of Large Language Model Inference Optimization: Bridging Model-Level and API-Layer Latency Reduction Strategies,"*** offers a multi criteria framework that unifies fine-grained model compression techniques with higher level API orchestration. Through a comparative analysis of post-training quantization methods focusing on activation aware approaches such as AWQ, alongside GPTQ and GGUF the authors evaluate trade offs among memory efficiency, throughput, and output quality. Their findings indicate that deployment performance depends not only on numerical precision but also on a co-design approach integrating optimized hardware kernels and adaptive parameter protection.

Together, these papers showcase the breadth and depth of current research across diverse domains of computing applications.

Editors