

WEEKLY NEWSLETTER



September 2025 (01.09.25 to 08.09.25)

RESEARCH ACCOMPLISHMENTS



Dr. Dilip Kumar Jang Bahadur Saini and Dr. G Hemanth Kumar collaboratively published a research paper titled: "Advanced Deep Learning for Real-Time Fraud Detection in Banking: Scalable and High-Accuracy Solutions" in the proceedings of the 2025 6th International Conference for Emerging Technology (INCET), IEEE, held in Belgaum, India, from 23rd–25th May 2025.

DOI: <https://doi.org/10.1109/INCET64471.2025.11139964>

Advanced Deep Learning for Real-Time Fraud Detection in Banking: Scalable and High-Accuracy Solutions

Publisher: IEEE [Cite This](#) [PDF](#)

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Abstract

Abstract:
The speedy digital evolution of the banking industry has resulted in a geometric explosion in fraudulent transactions, which in turn requires intelligent fraud detection tools in real time. This work presents a new state-of-the-art deep learning model that combines innovative architectures, such as transformer-based models and Graph Neural Networks (GNNs), for higher detection precision and scalability. Differing from traditional rule-based and machine learning methods, our approach uses temporal patterns of transactions, user behavior embeddings, and adversarial training to counter changing fraud strategies. Our method is compared with state-of-the-art techniques on big real-world banking datasets, exhibiting higher precision, recall, and real-time detection efficiency. We further provide an explainability module for transparency in the model, thereby overcoming regulatory and trust issues within financial institutions. The design is optimized for effortless deployment within high-throughput banking systems to minimize latency and adaptive learning. This work has a major breakthrough in fraud detection methods, yielding a solid ground for future AI-based financial security solutions.

Published in: 2025 6th International Conference for Emerging Technology (INCET)

Date of Conference: 23-25 May 2025 **DOI:** 10.1109/INCET64471.2025.11139964

Document Sections

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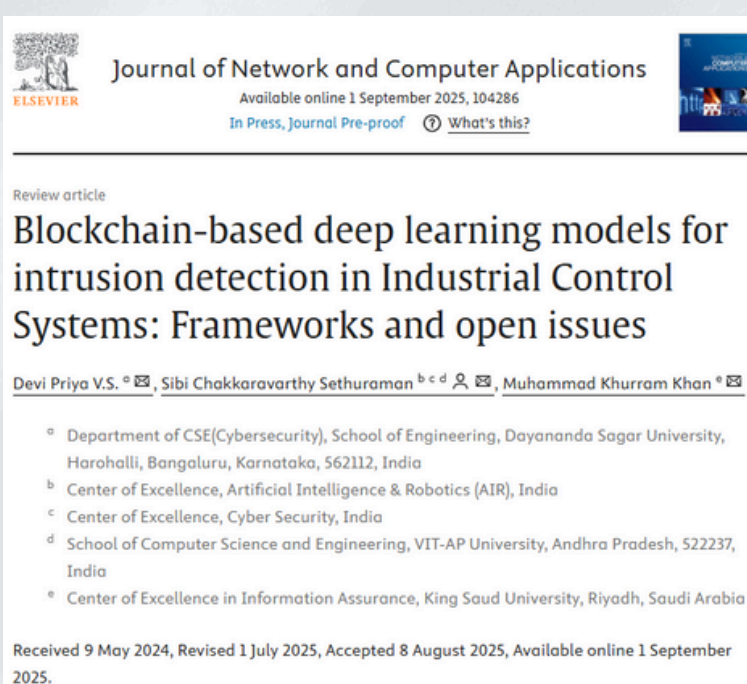
RESEARCH ACCOMPLISHMENTS



Dr. Devi Priya V.S. has published an article titled: "Blockchain-based Deep Learning Models for Intrusion Detection in Industrial Control Systems: Frameworks and Open Issues" in Elsevier's Journal of Network and Computer Applications (JNCA).

This work represents a significant step forward in advancing cybersecurity for industrial infrastructures, combining the predictive power of AI with the trust and transparency of blockchain.

DOI: <http://dx.doi.org/10.1016/j.jnca.2025.104286>



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STUDENT ACHIEVEMENTS

Mr. Mukesh Prasad Gupta (ENG24CY0136) has successfully completed a Cyber Security Internship at Elevate Labs from 23rd June 2025 to 28th July 2025, under the Skill India initiative recognized by the Ministry of MSME, Government of India.

