Advanced Machine Learning for Real-Time Fraud Detection and Prevention in Insurance Claims

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Abstract: *This paper investigates the application of advanced machine learning techniques for real-time fraud detection and prevention within the domain of Insurance Claims. Traditional rule-based systems often struggle to identify sophisticated and evolving fraud patterns. To address this limitation, we propose and evaluate a novel framework leveraging deep learning with attention mechanisms. Our results, based on a real-world dataset of auto insurance claims, demonstrate a significant improvement in detection accuracy and a reduction in false positive rates compared to baseline methods. The proposed system's real-time processing capabilities highlight its potential for proactive fraud prevention.*

Keywords: Fraud Detection, Fraud Prevention, Machine Learning, Deep Learning, Real-Time Analysis, Auto Insurance Claims