Chapter 14
Smearing Machine Learning and Deep Learning in E-Commerce Transactions for Monetary Justice:
Crushing Financial Frauds and Fostering Strong Financial Institutions

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ABSTRACT

Machine learning and deep learning techniques have emerged as powerful tools against several types of financial fraud. The banking and financial industry, a fundamental component of contemporary economies, is experiencing a significant upheaval due to the rise of digital transactions. This transition has resulted in an increase in financial fraud, necessitating a fundamental change in security standards. The use of advanced analytics, such as anomaly detection and pattern recognition, is examined to establish a strong defense against the continually changing strategies used by fraudulent entities in the ad click sector. Credit card management, a constant target for nefarious actions, necessitates an advanced strategy for fraud detection. This chapter examines AI-based document verification systems, highlighting their crucial role in safeguarding transactions reliant on document authentication. It addresses issues related to falsified documentation through novel methods, including the integration of blockchain technology with AI.

1. INTRODUCTION

Financial fraud presents a significant peril to the banking and financial sector, adversely impacting individuals, businesses, and entire economies. In recent years, the integration of which not only enhances security but also establishes an immutable ledger of transactions, mitigating risks associated with document-based frauds. Over the last few years, the e-commerce industry has grown incredibly to become a major player in how consumers interact with products and services (Havryk & Nazarova, 2024). Ecommerce has gone through significant but rapid changes in the way humans live their everyday lives, integrating online transactions which plays an important part for consumers globally as it offers convenience and accessibility. This explosive growth in e-commerce, however, has been accompanied by an explosion in financial fraud hurting both businesses and consumers. The Federal Trade commission reports annual losses from online fraud in the billions of dollars, so tools to detect and prevent fraud are more critical than ever. With advanced e-commerce platforms now in place, so too are the capabilities of fraudsters changing rapidly, calling for innovative solutions to address these dynamics.

The implementation and adaptation of machine learning and deep learning to detect and prevent financial fraud in e-commerce transactions are investigated. It will focus on different algorithms and methods used by banks and e-commerce platforms who fight efficiently against frauds. The exploration would also look at

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