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### Patent Search

Invention Title	IMPLEMENTATION OF NEW DATA AUGMENTATION TECHNIQUES FOR IMPROVING CLASSIFICATION PERFORMANCE IN CREDIT CARD FRAUD DETECTION
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#### Abstract:

The present invention relates to provide implementation of new data augmentation techniques for improving classification performance in credit card fraud detection. Fraud is a pervasive issue that costs billions of dollars to financial institutions and causes significant distress to cardholders worldwide. To combat this problem, many algorithms have been widely adopted for fraud detection. However, the performance of these algorithms heavily depends on the quality and quantity of data available for training. Our present invention discloses a novel approach to improve classification performance in credit card fraud detection by implementing cutting-edge data augmentation techniques that diverge from previous research. These techniques are not only innovative but also drawn from various sources, promising substantial advancements of fraud detection.

## Complete Specification

Description: Technical field of invention:

The present invention relates to provide implementation of new data augmentation techniques for improving classification performance in credit card fraud detecti

Background:

Credit card fraud remains a pressing concern in the financial industry. Despite the considerable advancements in fraud detection systems, criminals continually ada techniques to circumvent existing safeguards. Machine learning models have emerged as a vital tool for identifying fraudulent transactions. However, the success o models hinges on the data they are trained on. Inadequate or imbalanced datasets can lead to poor classification performance. To address this challenge, our pres invention explores the integration of new and unique data augmentation techniques to enhance the effectiveness of credit card fraud detection.

Groupings of alternative elements or embodiments of the invention disclosed herein are not to be construed as limitations. Each group member can be referred to claimed individually or in any combination with other members of the group or other elements found herein. One or more members of a group can be included in, deleted from, a group for reasons of convenience and/or patentability. When any such inclusion or deletion occurs, the specification is herein deemed to contain th as modified thus fulfilling the written description of all Markush groups used in the appended claims

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