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AI Based Fraud Detection System

Jadhav Riya[1], Rane Amruta[2],Raul Divya[3], Prof. Chandrakant Rane[4]
Department of Computer Engineering[1-4]
Indala College of Engineering, Kalyan, India

Abstract: *The expanding volume of advanced exchanges has driven to a noteworthy rise in credit card extortion, posturing genuine challenges for money related teach and buyers. Conventional extortion location strategies, which depend on predefined rules and manual checks, frequently fall flat to distinguish unused and advancing false exercises. To address these impediments, this venture presents an AI-based credit card extortion discovery framework that leverages machine learning calculations for real-time and exact location. By analyzing authentic exchange information, the framework recognizes designs and behavioral patterns related with false and veritable exercises. Highlights such as exchange sum, area, time, and recurrence are utilized to prepare models like choice trees, calculated relapse, Arbitrary Woodland Classifier and neural systems.The framework can distinguish peculiarities that veer off from a user's ordinary investing propensities and hail them as possibly false. Nonstop learning from modern information guarantees that the show adjusts to changing extortion strategies. the framework accomplishes a 94.5% precision on a engineered dataset. The web application, created with Respond and Jar, highlights a multi-step shape for client input and an admin login page with a brain-themed foundation, improving convenience and oversight. Information preprocessing, highlight choice, and show assessment techniques are utilized to optimize execution. Challenges such as engineered information confinements and openings for real-time checking and real-world information integration are examined, clearing the way for future headways in extortion discovery frameworks. The proposed framework essentially upgrades the effectiveness of extortion location, decreases wrong positives, and makes a difference anticipate budgetary misfortunes, in this manner making strides the by and large security and believe in credit card exchanges*

Keywords: Credit Card Fraud, Machine Learning, Random Forest, Fraud Detection, Web Application, React, Flask, Decision tree, json, logistic Regression

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