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(57) Abstract :
The present invention discloses a computer-based model (100) for detecting anomalies in financial transactions. The model includes a transaction input module (101), preprocessing engine (102), feature extractor (103), hybrid anomaly detector (104), explainability module (105), alert system (106), and secure storage (107). The hybrid detector combines rule-based, statistical, and machine learning methods to ensure accuracy, adaptability, and scalability. The explainability module (105) provides interpretable justifications, while blockchain-based secure storage (107) ensures immutability. The invention significantly improves fraud detection efficiency while reducing false positives, enabling real-time, transparent, and trustworthy financial monitoring.

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