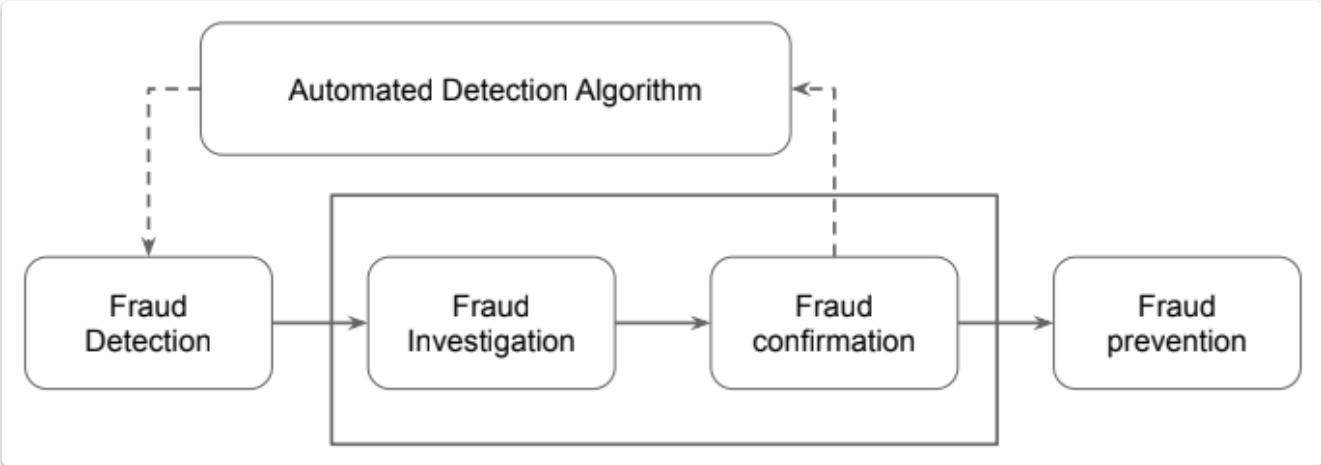
2.4 Fraud Management Cycle #FraudManagementCycle



Fraud Detection

Applying detection models on new, unseen observations and assigning a fraud risk to every observation.

Fraud Investigation

A human expert is often required to investigate suspicious, flagged cases, given the involved subtlety and complexity.

Fraud Confirmation

Determining true fraud label, possibly involving field research.

Fraud Prevention

Preventing fraud to be committed in the future.

Feedback Loop

Newly detected cases should be added to the database of historical fraud cases, which is used to learn or induce the detection model.

2.4.1 Updates #ModelUpdates

Considering the **dynamic nature** of **fraud**, a **regular update** of the model is **recommendable**.

The frequency of **retraining** or **updating** the detection model **depends** on **several factors**:

- The **volatility** of the fraud behavior;
- The **detection power** of the current model;

- The amount of (similar) **confirmed cases** already **available** in the database;
- The **rate** at which new **cases** are being **confirmed**;
- The required **effort** to **retrain** the model.

> ***Reinforcement learning*** *==> **continuously updates** the detection model by **learning** from the **newest observations**.*

Next Chapter: 2.5 - Fraud Analytical Process