# Fraud and Big Data

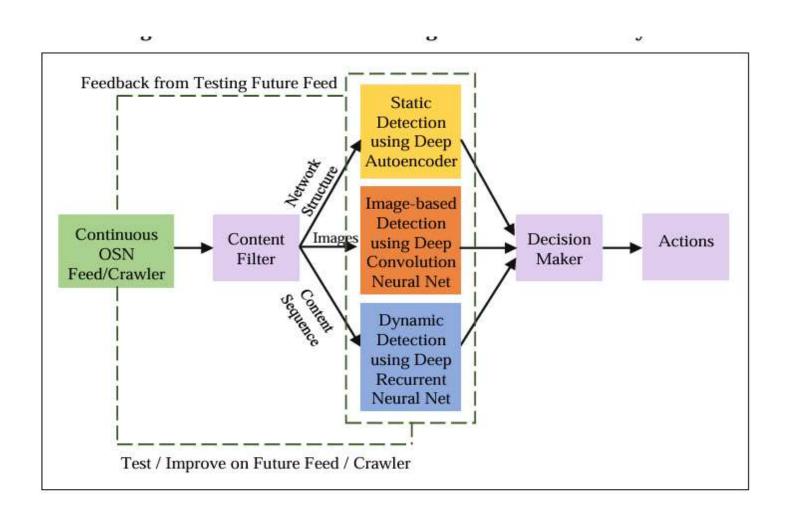
credit card fraud and insurance fraud

- Social media and mobile phones
- Big data technology provides an optimal technology solution
  - high volume (customer records and transactions for years)
  - high velocity (social media information and dynamic transactions)
  - high variety (unstructured data such as call center conversations and customer emails)

#### Elastic Search

- It is based on Apache Lucene
- work on huge historical data-sets in conjunction with real-time data to pick the identified deviations in payment patterns.
- Social Network Analysis (SNA)
- SNA lets the company to proactively look through large amounts of data to show relationships via links and nodes.
- Link analysis is used to look for clusters and how those clusters link to other clusters.

#### SNA



### Detecting and Preventing of Fraud

- Statistical method
- Big Data for Fraud Detection
- Enormous volume: Operate on all data, ability to handle very large data sets.
- 12 High speed: Near real-time processing using sophisticated technology.
- 1 Type of data: It is the ability to process and analyze unstructured data apart from the structured ones, which makes big data solutions very effective.

## Credit Risk Management

- American product leader for Master Card Advisors, Risk & Marketing Solutions, indicates that the typical credit risk framework involves four critical parts,
- viz., planning, account management, collections and customer acquisition.

  Figure 3.4: Credit Risk Framework

