

INTEGRA DETECT TEXT ANALYTICS

experience **expertise** // An organization's data may comprise as much as 80 percent **unstructured textual data**—email, documents, social media and Internet content, among others. Unlike structured, numeric financial data, unstructured textual data involves human communication and its underlying concepts, themes and emotional tones. Not addressing this data source may greatly reduce the effectiveness of forensic investigations. **BKD can help.**

BKD INTEGRA
DETECT

In investigations, our forensic analytics team blends investigative talent, sophisticated fraud detection technology, natural language processing and artificial intelligence (AI) to gain unique insights not possible with traditional approaches. It's called "**augmented intelligence**," and it combines the best of human investigators with the best of AI.



UNSTRUCTURED DATA

Since most textual data is human communication, it's laced with emotion and meaning that often transcends the sum of the words. That's why text analytics adds unique insights to an investigation, including:

42 PERCENT

Research shows 42 percent of fraud is detected by tips, according to the Association of Certified Fraud Examiners.

EMOTION DETECTION // Emails express underlying emotions through adjectives, phrases and idioms. In fact, the emotional state of an individual or group can be detected without even reading an email. Common tones include nervous, vague, conspiratorial, negative and tense.

NETWORK RELATIONSHIPS // Relationship maps illustrate interrelationships between subjects in an investigation. Sources include text and structured data as well as social media, computer contents and interviews.

AI & MACHINE LEARNING // AI-based tools help investigators quickly identify relevant content in textual data. The tools also can identify patterns in data that humans can't.

TOPIC & THEME MAPPING // Investigators can get a bird's-eye view of key issues, sentiments and subject concerns by extracting underlying concepts, themes and topics from communications.

BEHAVIORAL RED FLAGS // Personal pressures that lead to fraud—gambling, financial strain, legal problems, addictions and domestic issues—can be detected through text analytics. These stressors don't manifest in financial data.

CASE STUDY

When a company's ethics hotline received a report of possible fraud, BKD's IntegraDetect service analyzed email and social media communication for an entire division of the company.

Using **emotional tone detection**, BKD investigators honed in on groups of employees with above-normal vague and conspiratorial tones before a single email was read. Analyzing the emails driving the tones revealed a network of employees who routinely circumvented firm requests for proposal policies and were awarding contracts to members of their "buddy networks" as well as others who were engaged in various fraud schemes. BKD used automated **relationship detection** to leverage the findings and create a relationship map of employees, executives and key outside suspects to identify the web of deceit. We also used **artificial intelligence** to find additional relevant communications, which culled 2.5 million emails down to 15,000 for manual review.

BKD's augmented intelligence approach led to rapid detection of the issues as well as a quick resolution.

EXAMPLE CASES USING TEXT ANALYTICS

- Fraud investigation and prevention
- Litigation and early case assessment
- Conflicts of interest and relationship networks
- Vendor audits
- Financial statement fraud investigations
- Health care fraud and abuse
- Foreign Corrupt Practices Act
- Anti-bribery and corruption
- False Claims Act
- Corporate governance
- Risk assessment and monitoring
- Merger and acquisition due diligence
- Criminal intelligence
- Consumer sentiment analyses
- Call center analytics



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