TORCH.AI™

Torch.AI™ Detects Suspicious Financial Transactions Through Advanced Analytics

Nexus™ transforms the fraud and money laundering investigation process through human-centric machine intelligence

Identifying suspicious activity in banking transactions is one of the most difficult tasks in financial crime compliance. The growing number of transactions, combined with insufficient data on the purpose of the transaction or the parties involved, makes the task increasingly challenging— and risky—for financial institutions. Traditional analytic methods have proven inadequate for the task.

Nexus, an AI/ML-enabled data intelligence platform from Torch.AI, leverages big-data analytics and machine learning (ML) to help financial institutions effectively and efficiently identify suspicious transactions and bad actors. This approach improves Transaction Monitoring (TM) and the detection of suspicious activities by:

✓ Unifying disparate data sources to create a holistic view of entities, behaviors, and relationships.

✓ Creating a richer data profile and a deeper transaction history than financial institutions keep on their own customers.

✓ Applying ML-enabled algorithms to generate a risk score for entities and transactions.

✓ Modeling financial crime typologies to direct analysts toward the parties most likely to pose a risk of illicit activity.

Our Solution

Torch.AI pioneered patent-pending methods of enhancing text and document-based data in real time through an extensive library of ML-enhanced algorithms. These algorithms process both structured and unstructured input data, and they include features such as optical character recognition (OCR), natural language processing (NLP), and sentiment analysis. The Nexus platform is an open architecture of composable microservices that enable massively scaled, ultra-high-performance text and document-based data processing.

Nexus instantly understands the object-level details of text and document data regardless of file type, content type, or encoding. Nexus semantically mines objects, entities, and relationships, and it stores abstractions of resolved entities in a "knowledge layer" which acts as a contextual overlay on top of a data ecosystem. Nexus creates graphs of relationships between data objects, revolutionizing text and document data exploration and discovery. Through an intelligent and secure connection via GraphQL, Nexus communicates agnostically with downstream business systems such as Power BI™, Tableau™, Qlik™, and others.

Intelligent Business Automation

In its mission to help financial institutions effectively and efficiently identify suspicious transactions and bad actors, Nexus ingests both structured and unstructured trade data from the authoritative source. This data includes:

- ✔ Sales invoices
- ✔ Insurance documents
- ✔ Customs declarations
- ✔ Bills of lading

Nexus then standardizes, processes, and enriches the data in real time to provide holistic views of entities, behavioral context, and anomaly detection.

The Holistic View

Nexus creates a holistic view of entities, behaviors, and relationships. Nexus enriches first-party data from third-party data sources and gathers additional attribute information including (but not limited to) industry, registration verification, financials, registration agent addresses, ownership, corporate structure, and incorporation date. This automated enrichment process transforms a thin record of minimal counterparty data into a rich profile often including more information than a financial institution would keep on its own customers.

Automatically Risk-Rates Counterparties

Nexus employs a machine learning model to automatically generate a risk score for entities and transactions. This approach is more comprehensive than a rules-based model, can adapt to feedback and changes of behavior, and requires less frequent validation and intervention. For example, Nexus uses thousands of previous cases from the institution to point the model toward known licit and illicit companies so that it can identify common shell company features. Datasets derived from the Panama and Pandora Papers assess the model's ability to identify previously known shells, as well as its potential to help authorities and financial institutions identify unknown shell companies.

Unleashes Investigative Intelligence

With enriched entity profiles and deeper transactional history, analysts can more efficiently approach an investigation and delve deeper into cases that warrant greater attention. Nexus' novel application of data analytics and machine learning transforms an organization's ability to detect behaviors and activities that may indicate fraud, money laundering, or a breach. Torch.AI is a partner to financial institutions in their quest to ensure AML compliance and safe and secure transactions.

Nexus analyzes data in flight and does not copy data from the authoritative source or persist sensitive data such as personally identifiable information (PII).