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Oracle Financial Services Compliance Studio

Next-Gen Analytics for Proactive Identification of Patterns, Threats and Anomalies

Among the most challenging aspects of instituting effective anti-money laundering and anti-fraud programs at financial institutions is the need to adapt quickly to changing patterns of financial crime to limit both financial and reputational risks. Institutions must work unceasingly to create more accurate models to catch increasingly sophisticated illegal activity, reduce the cost of investigating false positives, and protect client relationships. With more new innovative products and data sources than ever, the ability to continually discover emerging risks and new criminal patterns, coupled with the capacity to rapidly operationalize newly developed models into production, is a necessary requirement for modern financial crime platforms.

Purpose-Built for Detection of Financial Crime

Most financial institutions today focus on not just reducing false positives, but achieving overall efficacy of alerts while optimizing analyst efforts on suspicious activities or transactions. A judicious combination of advanced techniques such as semantic and property graph analytics, transaction flow analytics, and machine learning can help financial crimes analysts and data scientists successfully achieve this. Further, financial crime and compliance management business and operational teams—from investigators to scenario testers—need tools to help them quickly understand, digest, and act upon the findings produced by the data scientists.

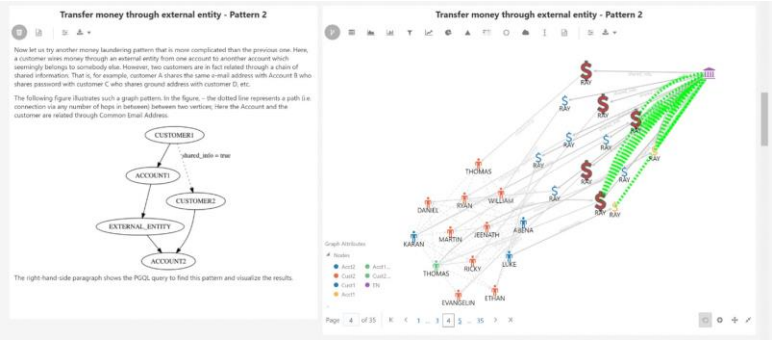

Figure 1: Discover, visualize and document criminal patterns

Oracle Financial Services Compliance Studio meets the needs of all these diverse groups. It provides a comprehensive analytics toolkit along with secure access to the institution's financial crime data which can be rapidly operationalized to pass the necessary context to investigators and managers to make more accurate decisions.

Industry Challenges

- Increasingly complex, sophisticated & ever-evolving financial crime landscape
- Lack of capability in legacy solutions to predict & identify potential threats, patterns or anomalies
- Time from Ideation to Production is hampered by siloed systems and processes

Why Oracle Compliance Studio?

- 25 years of fighting financial crime for over 150+ global FIs
- Recognized as Leader in Quadrant SPARK Matrix for AML 2021
- Recognized as Leader in FCCM Chartis Research Report 2020
- Comprehensive Analytics toolkit to rapidly discover and model emerging risks and financial crime patterns
- AI, ML& Graph analytics enabled applications to quickly identify & detect potential threats/ anomalies
- Robust Model Management & Governance functionality

It is designed from the ground up with relationship and behavioral monitoring in mind. With seamless access to production data in a secure and isolated discovery sandbox, a pre-defined Financial Crime Graph Model, and predefined scenarios and topologies, institutions gain an accelerated path to interactively explore financial crimes data and stop crime in its tracks.

Unified View of Entire Data

Effective discovery requires all of the financial institutions' transactions, accounts, alerts, and other financial crimes-related data such as watch lists and datasets from ICIJ. All of this data is together and made available for discovery and analysis with Oracle's Compliance Studio.

Engineered to be a portal into the enterprise's financial crimes data, Compliance Studio includes an industry first data model for graph analytics across financial crime data. The included Financial Crimes Graph Model (FCGM) provides a target representation for enterprise wide financial crime data as an enterprise-wide global-graph, enabling a whole new set of financial crime use cases. The global-graph therefore links all of the institution's financial crimes data – AML, Fraud, Alerts, Sanctions lists, KYC data, and external datasets – and serves as the single, central source for compliance investigations.

Additionally, in an environment where Oracle compliance applications are installed, Compliance Studio automatically loads data from the Oracle Financial Crimes Data Model into the Financial Crimes Graph Model, significantly reducing the time and effort data scientists spend in preparing data for analysis.

Machine Learning for AML

Machine Learning helps financial institutions to process huge quantum of data, identify patterns and reduce human intervention by leveraging historical outcomes or unlabeled data. Oracle's extensive capabilities in Machine Learning for AML bring together supervised-, unsupervised- and Graph- machine learning to address specific use cases such as typology detection models, anomaly detection, customer segmentation, customer risk scoring and event scoring. Oracle's ML for AML not only helps to reduce the number of false positives but also reduces the cost of AML compliance audit significantly.

Key Value Adds:

- Use ML to solve problems that are meaningful to the business
- Accelerate the modelling process by leveraging OTB features and transformations
- Rigorously evaluate, explain and monitor models to comply with model risk requirements

Entity Resolution for AML

Oracle offers a fully inbuilt Entity Resolution into our investigative and detection engines included in the Compliance Studio. The system allows for manual decisions and is easily configurable by users. It comes with standard functions such as machine learning based similarity scoring and scoring boosted by graph structure exploitation.

Key Features

- Industry leading Entity Resolution Engine
- Proven Enterprise Financial Crimes Graph model accelerates financial crime investigation use cases.
- Explore the financial crimes global-graph using an interactive and visual graph explorer tool.
- Integrates fully with Oracle Financial Crimes Application Data and is readily usable across the enterprise financial crimes data lake.
- Includes pre-built notebook library for financial crime use cases
- Easily recognizable. Apache Zeppelin inspired user interface.
- Includes a highly scalable in- memory Oracle Graph Analytics Engine (PGX) which uses an SQL-like graph query language (PGQL)
- Leverages Graph, Supervised ML and Unsupervised ML to build typology detection models, detect anomalies and risk score customers or events
- Simplified APIs for each stage of the modelling lifecycle
- Real-time event risk scoring engine with algorithmic scoring models for accurate customer risk assessment

These proprietary approaches developed with our proprietary Oracle Labs provide for extremely high precision and recall within the models.

This handles cross language name matching, models for name rarity granular to country, etc. With graph structure exploitation, we can greatly increase the resolution capability against other providers by interrogating the network that surrounds potential matches. This allows us to manage all scenarios ranging from rules based detection to unknown anomaly detection.

Benefits:

- Gain a single customer view
- Drive down false positives
- Uncover hidden connections & networks
- Truly understand your customer and their risk

Model Management and Governance

The Financial Services industry is continually faced with the challenge to comprehend and react to exponentially growing volumes of data. The need to identify hidden data patterns while complying with model risk and governance requirements makes model life cycle management and governance capabilities mandatory for Financial Services organizations. Oracle Financial Services model management and governance addresses this by providing a solution that combines advanced model lifecycle management with the ability to address regulatory requirements and model governance.

Oracle's MMG enables FIs to implement their IT policies while providing flexibility and freedom that Data Scientists and Statistical Modelers desire. It leverages a Notebook environment to develop, deploy, and manage models at enterprise level.

Key Highlights:

- Supports End-to-End Data Management, Modeling & ML Lifecycle
- De-Risk AI-ML by Design, Development and Deployment Processes
- Model Repository with history and versioning
- Robust Model Deployment Processes/Controls and Workflow
- Visual Lineage, Explainability in both qualitative (NLP) and quantitative metrics
- Citizen-Modeler support that allows for business to lay out the distinct steps, features of importance, evaluation criteria, deployment target, controls, etc.

Key Benefits

- Drives data scientist productivity with a unified tool for machine learning, graph analytics, and AML scenario authoring
- Accelerate financial crimes investigations with search enabled across customers, transactions, watchlists and external data linked together in first-of-its-kind Enterprise Financial Crimes Graph.
- Discover emerging risks and test for known risks coverage using the power of graph analytics and Big Data.
- Make data lakes usable by easily incorporating visualizations and results into operational systems using standard REST API calls.
- Leverage existing knowledge in open tools such as Apache Spark, Apache Zeppelin, R, and Python

About Oracle Financial Services Analytical Applications

Oracle Financial Services Analytical Applications bring financial institutions best-of-breed capabilities to proactively manage Financial Crime, Compliance, Risk, Treasury, Finance and the Front Office. The applications are built upon a commonly available analytical infrastructure consisting of a unified financial services data model, analytical computations, a Metadata driven "R" modeling platform, and the industry-leading Oracle Business Intelligence platform.

A single, unified data model and infrastructure provides one version of the analytical "truth" to business users throughout the entire enterprise. This enables financial services institutions to confidently manage performance, governance, risk and compliance. Shared data, metadata, computations and business rules enable institutions to meet emerging business and regulatory requirements with reduced expenses and the unified platform helps financial institutions to leverage existing investments.

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