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DATA-DRIVEN COMPANY AML ANALYTICS FOR BANKING

DATA-DRIVEN THROUGH AML ANALYTICS

A multi-national bank client transformed and optimized its AML processes through the usage of Machine Learning techniques & Robotics Process Automation



During the last years the Bank has paid billions of dollars in fines due to AML breaches, thus it was operating under significant regulatory pressure with a key priority to demonstrate improved compliance with financial crime regulations

Current AML detection engine was producing a high rate of false positives and low volumes of true suspicious activity. This had as a result to double the headcount of respective departments within the last 2 years

SOLUTION

Developed an end-to-end solution to tackle AML challenges and unleash potential benefits by leveraging robust machine learning algorithms and Robotic Process Automation



- □ 1/3 of headcount reduction
- \Box > 50% reduction in false positives alerts
 - Enhancement of compliance quality

Multi-million total cost saving
(approx. > \$100m on an annual basis)

CURRENT AML DETECTION APPROACH

The current approach to money laundering transaction monitoring is flawed as it produces a high rate of false positives and seeks to detect only known patterns of money laundering activity

AML detection is based on <u>static</u> <u>rules</u> that look at various stages of the money laundering process Inefficient and ineffective learning of new AML patterns from investigators' feedback

High cost and extensive manual investigation effort. Difficulties on data integration



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PHASE ONE – AML 1.0

The Bank followed a two-phase approach. In Phase 1 the Bank acted on the immediate AML challenges, while in Phase 2 the Bank focused on transitioning towards a more intelligent & strategic approach



centralize data & developed solutions for AML management (identification/ prevention) Automate the collation of data required and steps performed to investigate suspicious cases through Robotics Process Automation

Utilize advanced analytics techniques to fine-tune detection scenarios (ie rulesets & thresholds) and prioritize/ classify alerts

AML EVOLUTION: CORE ELEMENTS

Network driven machine learning explores all hidden, emerging and unknown patterns of customers behaviour- bringing a step change to Anti Money laundering solution

Solution features

- Self learning capability Automatic incorporation of investigators' feedback using Artificial Intelligence.
- ✓ Efficient detection of new, previously unseen ML patterns and behaviours.
- Easy integration with additional internal and external data (plug and analyse).
- ✓ Interactive visualisation of AML cases to facilitate faster investigation

6. Interactive GUI for 1. Data are stored in a investigators to analyse customer-level graph alerts and consume database customer-level insights in an easy manner Behavioural links and information flows data Bank's 3. Enrich input AML Data by adding customer interaction data 2. Possibility of integration with 4. Use network measures additional data and investigator's sources at a feedback to predict customer-level Customercustomers with normal level graph and unusual behaviour Legend 5. Study customer cliques No investigation with emerging unknown O Unknown behaviour Internal bank External data behaviours in order to data from other (e.g. social Investigator identify new AML patterns outcome negative business units networks etc) Investigator outcome positive

High Level Solution design

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SOLUTION FUNCTIONAL FEATURES

AML2.0 solution leverages Multi Agent System approach to uncover customer connections & behaviour patterns



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SOLUTION ARCHITECTURE

The AML 2.0 solution operates on a cross-layer manner via a series of dedicated batch jobs



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