BABELSTREET

Babel Street Match Improves FI's Name-Matching Accuracy by Up to 70% on OpenSearch

A large online brokerage house in Europe empowers its millions of customers to trade bonds, derivatives, cryptocurrencies, and more via its mobile app. It's a cutting-edge business. But it nonetheless experienced difficulty with a core anti-money laundering (AML) process: name matching.

Accurate name matching is the cornerstone of AML mandates worldwide. It is vital for comparing customer names against the European Union Consolidated Financial Sanctions list, along with other screening lists and watch lists. Name matching is also fundamental for a host of transaction-processing best practices.

The challenge

To match names, this financial institution (FI) relied on a homegrown application run in an on-site data center. This system was suboptimal — producing an enormous number of false positives. Worse, the bespoke application could only search and match names of 26 characters or less. This limit proved insufficient for many Arabic, European, African, Asian, and Indian names. As a result, name matching at this FI required significant manual intervention. Time spent on manual intervention both strained operational resources and delayed customer payments.

The solution

To improve name matching and other processes, the FI chose to centralize and modernize its infrastructure on an AWS environment. It employed Amazon OpenSearch Service as its search and analytics engine. Wanting better name-matching processes, the FI embarked on a proof of concept with the Babel Street Match Plugin for OpenSearch.

Babel Street Match is an AI-powered solution tailored to FIs' need for fast, accurate, multilingual matching at scale. Using advanced natural language processing algorithms, the platform intelligently matches and scores names of any length across 25 languages and a variety of different scripts. These include Arabic, Russian, Chinese ideographs, and Japanese Kanji. In doing so, Match dramatically reduces false positives and the concurrent need for manual investigation. Match parameters can be tuned easily to meet an FI's risk profiles.

Benefits

Migrating to AWS enabled the brokerage house to offload the operational burden of managing and scaling its search-and-analytics infrastructure. By procuring the Match Plugin through AWS Marketplace and deploying it within their AWS account using Amazon OpenSearch Service, this institution was able to seamlessly centralize and streamline its customer-screening and payment workflows.

A Match proof of concept showed an improvement of up to 70% in name-match accuracy. In fact, working with this organization, Match yielded an F1 score of more than 90 percent on a relatively small test set of approximately 2,000 names — even before any configuration changes or tuning of the default settings. This level of accuracy significantly reduces the amount of manual intervention required for name matching processes, and, by speeding payment, stands to enhance the customer experience at this institution.

Up to **70%** improvement in name-mathcing accuracy

F1 Score* of more than **90%**

F1 score is the industry standard for calculating accuracy as it aims to measure a test's accuracy. It is the harmonic mean of precision and recall and is calculated by the following formula.

$$F_1 = 2 * \frac{precision * recall}{precision + recall}$$

Babel Street is the trusted technology partner for the world's most advanced identity intelligence and risk operations. The Babel Street Insights platform delivers advanced AI and data analytics solutions to close the Risk-Confidence Gap.

Babel Street provides unmatched, analysis-ready data regardless of language, proactive risk identification, 360-degree insights, high-speed automation, and seamless integration into existing systems. We empower government and commercial organizations to transform high-stakes identity and risk operations into a strategic advantage.

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