BABELSTREET

SOLUTION BRIEF

Artificial Intelligence Solutions for Mission-Critical Defense

Accelerate the time to actionable insights

The success of today's missions relies on the use of human language technology — whether it's matching names to watchlists, enriching data, or extracting insights from large volumes of text.

Names are rarely straightforward and highly variable. Misspellings, honorifics, titles, mis-ordering, missing hyphens, or spaces between names all lead to difficulty in matching names of people and those of organizations and locations.

Analysts must make rapid decisions based on available information, so the information must be as accurate as possible. Artificial intelligence (AI) solutions for name matching use carefully-tuned algorithms to understand equivalent phonetic spellings, nicknames, and all possible name variations within each language.

Multilingual text adds another layer of complexity — a system that relies on translation before matching will represent names based on their literal meaning. The same is true for words that rely on context, and whose meaning can change based on how they appear in a sentence. An AI-based system that matches names in and across languages understands these pitfalls and can avoid them.

AI-based named entity recognition enables the extraction of mentions of individuals, locations, and organizations from unstructured text, and more, linking them to known entities in a knowledge base.

What's at risk?

In high-stakes name matching situations, such as border security, a false negative result from checking a passport against a national security watchlist could admit a potentially dangerous person into the country.

For intelligence analysts, missing the connections between essential elements of information could put the lives of citizens and service personnel at risk. Not seeing the big picture, or not finding and connecting key entities can cause significant damage to national security.

Utilizing intelligent name matching to strengthen U.S. borders

Accuracy is the top priority of many missions that use human language technology — and if there is a hole in the system, it is a risk to national security. Missing even a single match against a watchlist puts citizens at risk. U.S. Customs and Border Protection (CBP) needed a highly reliable solution to prevent known watchlist individuals from passing through screening. By integrating Babel Street Name Match (formerly Rosette) into its existing screening system, CBP added greater name matching accuracy — and ultimately greater security — to its border protection efforts.

U.S. Customs and Border Protection

Trusted by intelligence and security organizations worldwide

Rapid advances in AI and natural language processing (NLP) have made it possible to dramatically reduce the time between acquiring data and acting on it. The ambiguities introduced through human and machine translation can be virtually eliminated, and mission-critical decisions can be made in near-real time, even when data is in multiple languages and scripts.

Babel Street Analytics is AI-powered software for multilingual name matching and text analytics. Currently in use across defense, intelligence, and border security organizations worldwide, Name Matching addresses the complexities associated with matching names to watchlists while Text Analytics extracts knowledge from text. Babel Street Analytics integrates with search engines and applications, so there's no need to replace existing systems.

Key capabilities include:

Name matching — For handling the challenges associated with variations in the names of people, organizations, and locations around the world. Our fuzzy name matching algorithms address the variety and ambiguity of name-centric data to accurately and intelligently find matches quickly.

Entity extraction — Multiple approaches, such as pattern matching, statistical models, and deep-learning models, to maximize accuracy for each entity type. And while Text Analytics offers out-of-the-box models for numerous entity types, it can also be quickly adapted to process the domain-specific data for various defense and intelligence use cases.

Event extraction — Detects mission-specific events within text and extracts the key people and their roles, places, organizations, and dates/times mentioned. Whereas traditional machine learning requires large volumes of training data, our innovative approach requires very little annotation to achieve high levels of accuracy. Text Analytics can be integrated with other systems to display event insights in context with geospatial and other data sources.

Cross-lingual semantic search — Semantic search is made possible through word embeddings, a technique that encodes the meaning of words as numeric arrays. Words and phrases with similar values will be close in meaning, whether they are in the same or different languages. This enables analysts to expand searches beyond keywords to find matches based on meaning.

Data enrichment — Text analytics and metadata tagging enable intelligent, faceted search. When documents are tagged with their language(s), transliterated entity mentions, categories, sentiment and more, searches yield more complete results.

Extracting essential elements of information from noisy text can feel impossible…
With Babel Street Analytics, welcome to what's possible

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.

Learn more at **babelstreet.com**.

BABELSTREET