

# Babel Street Match

## BABEL STREET ANALYTICS

In government and industry, the task of matching names across diverse, multilingual sources in data-intensive environments is complex. Failures in name matching — especially in critical scenarios like border crossings, counterterrorism, and financial compliance — can have severe consequences.

Babel Street Match is an AI-powered solution for organizations whose risk and identity operations depend on correctly matching names. Using advanced natural language processing algorithms, Match provides intelligent name, address, and date matching.

### Key Features

**In-depth knowledge of names** – Match considers the many ways names vary across multiple languages, scripts, and cultures.

**Match confidence scores** – Match calculates a normalized, human-readable score that indicates the degree to which names match and provides an explanation for how it arrived at that assessment. Confidence scores form the basis for a match threshold that can be used to automate decision workflows.

**Configurable match parameters** – With the Match Studio administrative interface, users can immediately see the effect of configuration changes on match scores as they optimize Match performance to meet their data and risk profile.

### Benefits

- Fast, accurate name matching across many languages and scripts
- Reduction of false positives and false negatives
- Explainable match scores
- Rapid analysis for high-volume, high-velocity environments
- Configurable for risk tolerance, regulatory requirements, and data profiles
- Lightweight implementation footprint

**Two-pass matching methodology** – When matching names against a list, Babel Street Match performs a high-speed, high-recall first pass that returns all likely candidates based on match keys applied to the list and query names. The second pass applies AI and machine-learning models trained on thousands of real-world names to calculate the match score and rank the results.

**Multilingual name match** – Match understands transliteration spellings and multilingual naming conventions and it applies multiple analysis methods depending on the language to ensure highly accurate matches. It processes names in native script for many languages, including Chinese, Japanese, Korean, Arabic script languages, and

Russian. Match detects the language origin of the name, and as appropriate, translates the name back to its language of origin using dictionary data.

**Long and multi-component names** – Many names have multiple components that increase the number of potential variations and the complexity of matching. Babel Street Match algorithms compare name components, so matching complex names is as quick as matching simpler names. This also makes it possible for it to match a multi-component name despite never having seen it before.

**Use of other identity attributes** – Where other data points are available, such as address and date of birth, Match intelligently matches those components and factors them into the match score calculation.

**Company and organization name match** – Organizational names often consist of common words and their synonyms. Match uses word and text embeddings to determine the semantic similarity of organizational names across languages.

**Multiple deployment options** – Match can be implemented as an on-premises or cloud-based system through a RESTful API, or integrated with existing search engines and legacy applications through an SDK or the plugin mechanism of Elasticsearch and Apache Solr.

## Babel Street Match understands over 15 ways names vary

Phonetic similarity

[Kailey](#) ↔ [Caylee](#) ↔ [Kaylie](#)

Transliteration spelling differences

[Abdul Rasheed](#) ↔ [Abd al-Rashid](#)

Nicknames

[William](#) ↔ [Will](#) ↔ [Bill](#) ↔ [Billy](#)

Missing spaces or hyphens

[MaryEllen](#) ↔ [Mary Ellen](#) ↔ [Mary-Ellen](#)

Titles and honorifics

[Dr.](#) ↔ [Mr.](#) ↔ [Ph.D.](#)

Truncated name components

[Blankenship](#) ↔ [Blankensh](#)

Gender

[Jon Smith](#) ↔ [John Smith](#) (but not [Joan Smith](#))

Missing name components

[Phillip Charles Carr](#) ↔ [Phillip Carr](#)

Out-of-order name components

[Diaz, Carlos Alfonzo](#) ↔ [Carlos Alfonzo Diaz](#)

Initials

[J. E. Smith](#) ↔ [James Earl Smith](#)

Name split inconsistently across database fields

[Rip · Van Winkle](#) ↔ [Rip Van · Winkle](#)

Same name in multiple languages

[Mao Zedong](#) ↔ [Мао Цзэдун](#) ↔ [毛泽东](#) ↔ [毛澤東](#)

Semantically similar names

[PennyLuck Pharmaceuticals, Inc.](#) ↔ [PennyLuck Drugs, Co.](#)

Semantically similar names across languages

[San'in Telegraph and Telephone Corporation](#) ↔ [山陰電信電話株式会社](#)

Organizational aliases

[Boston Brewing Company](#) ↔ [BeantownBeer](#)

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](https://babelstreet.com).

