

Simple, AI-powered Fuzzy Name Matching for Elasticsearch

BABEL STREET ANALYTICS

Babel Street Match complements Elasticsearch to deliver more accurate name search results with speed and accuracy. Using its patented, two-pass system for intelligent name matching, customers report up to a 90% reduction in false positives when they switch to Match. This powerful capability simply plugs into Elasticsearch.

Enterprise-level multilingual identity verification

Whether your name search is for watchlist screening, patient/customer lookup, master data management, or log analysis, you want to see results that are comprehensive and precise. Match handles misspellings, nicknames, aliases, titles, phonetic spellings, out-of-order names, transliteration spelling variations, and matches across more than 20 languages and their native scripts, including Arabic, Chinese, Japanese, Korean, Persian, Russian, Spanish, and Urdu.

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

Making complex name and information matching easy

No more complicated multi-field queries with one field for every potential name variation. The Match plug-in for Elasticsearch contains a custom mapper which does all the work. Simplify your name search workflow with custom Lucene queries to generate candidate name matches and rescore queries to grade names and re-rank results according to intuitive match scores from 0 to 1.

Better search, recall, and precision

Using a special “name data” type, Match indexes keys for different name variations in separate subfields for every token, in a high-speed, high-recall first pass to find match candidates. In a second pass, it rescores the candidates with high precision AI. The match score can add automation by using it to only display matches above a certain score, and thus reduce false positives and minimize false negatives. Tune match score and behavior through a user-friendly administrative interface that shows in real time how changes affect overall precision, recall, and scores.

More than just personal names

To better match organizational names, Babel Street Match uses semantic similarity to fuzzy match “PennyLuck Drugs” to “PennyLuck Pharmaceuticals,” or match company names across languages. The same AI matches addresses whose components — such as, building name, street, city, province — often contain names. Flexible configurations enable searching any number of identifying fields to calculate the final match score.

Real-time response, easy integration, any-size data matching

Get better search results with our fuzzy name matching plug-in to Elasticsearch. Babel Street Match scales to meet any size data matching requirement with a real-time response even when processing hundreds of millions of names. Download, install, and start using our world-class fuzzy name matching capability in just minutes.

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.