

# FUZZY MATCH ALGORITHM

## INTRODUCTION

When it comes to matching incoming marketing leads against CRM accounts a simple string match may be sufficient for some people, but is that enough?

What if you were told a thorough operation has to include taking out common legal company suffixes, handling special characters, and being able to identify acronyms and nicknames common in the business world. It also has to be able to recognize popular stock quotes, identify what entities have undergone mergers or acquisitions, and take into geographical sensitivity into account when matching leads. Wouldn't that be much better?

## VYAKAR'S FUZZY MATCH LOGIC

Over the years, Vyakar has developed a state-of-the-art fuzzy match algorithm that is not only fast and accurate but also flexible to fit different needs. It's not a final formula; behind the scenes Machine Learning also allows Vyakar to be able to improve that algorithm over time.

Fuzzy Matching accuracy is achieved by hundreds of matching rules and thousands of data points. The following are the key areas where rules have been implemented:

### LEGAL SUFFIXES

Not all companies have the same names or backgrounds. However, company suffixes such as Inc., Corp., LLC, and Ltd., etc. don't serve much purpose when it comes to

matching searches. Vyakar's algorithm makes sure these suffixes are ignored.

### SPECIAL CHARACTERS

Special characters like "&" and "AND", "AT" and "@" are practically the same. Vyakar's algorithm is designed to ignore these as well as other special characters like commas, periods, etc. Since company names can come in other languages you should expect to encounter accented characters like "é", "ê", "ç", "ñ" and "à". With Vyakar's system, items like these are controlled in such a way to produce desired results.

### ACRONYMS

Are IBM, I.B.M., and International Business Machines the same? In Vyakar's search algorithm they will be. It is able to identify popular acronyms with or without spaces, with or without dots, etc. Are you looking for Ingvar Kamprad Elmtaryd Agunnaryd? That is actually shortened as IKEA. Dalsey, Hillblom and Lynn is more popularly known as DHL, just to name a few.

### POPULAR NAMES

Not all big companies or businesses were previously known as they are called now. For example Quantum Computer Services is now called AOL, AuctionWeb is now called eBay, and the Marafuku Company is now called Nintendo. Vyakar's algorithm will be able to recognize popular names and previous names companies went by.

### WEB DOMAIN

Over the course of its operations, a business may put up new websites and abandon old ones several times. It may even set up a domain to help direct customers to

the right website. A record with a missing company name but valid business domain presents no problem to Vyakar's match algorithm.

#### GEOGRAPHICAL SENSITIVITY

Vyakar's match algorithm searches all over the world, but priority is given to geographically closer company location. So in case of multiple matches you don't have to worry about looking at results that are actually inaccessible to you, or located halfway around the world.

#### MERGERS AND ACQUISITIONS

Here's what happened earlier in 2017: Extreme recently bought Avaya's Networking Business Unit, Xerox recently bought MT Technologies, and Palo Alto Networks recently bought LightCyber. Are other algorithm systems familiar with business mergers that took place recently? Vyakar's search algorithm will know what companies already merged with what, like Youtube with Google, and Taleo with Oracle, etc.

#### CUSTOMIZATION AND PERFORMANCE

Vyakar's fuzzy match algorithm is designed to be flexible to fit your needs. You can turn on or off some of the rule to adjust the match confidence level. Stricter rules means fewer results, but these results will be more closely matched to what you are looking for; relaxed rules means there will be more results to choose from, but only loosely matched to your criteria.

Also, if there are certain companies that always go together for your business (due to existing relationships), or never go together, these can be defined in custom "Always Match" or "Never Match" rules.

How fast does Vyakar algorithm and architecture work? It is designed to match more than 7 million records per hour. This will come in very handy when running a segment based on a company name match.



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