# Multi Core Search (MCS): make your documents search engine 20% more accurate with AI

Most search engines use one optimized search method (core) with fluctuating performance when requests greatly vary. Search engines can leverage user information to compensate, however, this is not always possible (eg due to GDPR constraints).



#### □ COMPETITIVE ADVANTAGES

- Search accuracy up to 20%
- Best perf. when users' queries greatly vary
- · Do not rely on users' personal data

### **₹** DESCRIPTION\*

- MCS improves document search accuracy by selecting in real time the best search method for each users' query
- Search results are up to 20% more relevant according to the desired optimization (eg users' satisfaction, conversion rate...)
- Benchmarked against 5 international reference collections (example below)
- Maximum performance boosts when user queries greatly vary
- Limited performance impact in production
- Do not leverage any user behavior data

# Learning phase 1000's of search methods queries-results dataset Al engine Production phase Al engine Real time selection of the best seach method

Performance comparison of our MCS method with Oracle (best possible perf.) and state of the art search methods, on the Clueweb12B TREC collection.

#### **APPLICATIONS**

- Search engines
- Information retrieval systems without personal data
- Recommandation systems

#### **○ INTELLECTUAL PROPERTY**

Software

#### O DEVELOPMENT STAGE

Technology validated at lab level



# **Q** LABORATORY



#### **ETECHNICAL SPECIFICATIONS**

	ERR-IA@20	α-nDCG@20	NRBP
Oracle	.80	.77	.81
MCS	.77	.71	.75
BM25	.35	.42	.31
SQE	.40	.38	.39

<sup>\*</sup>Technology requiring license rights.

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