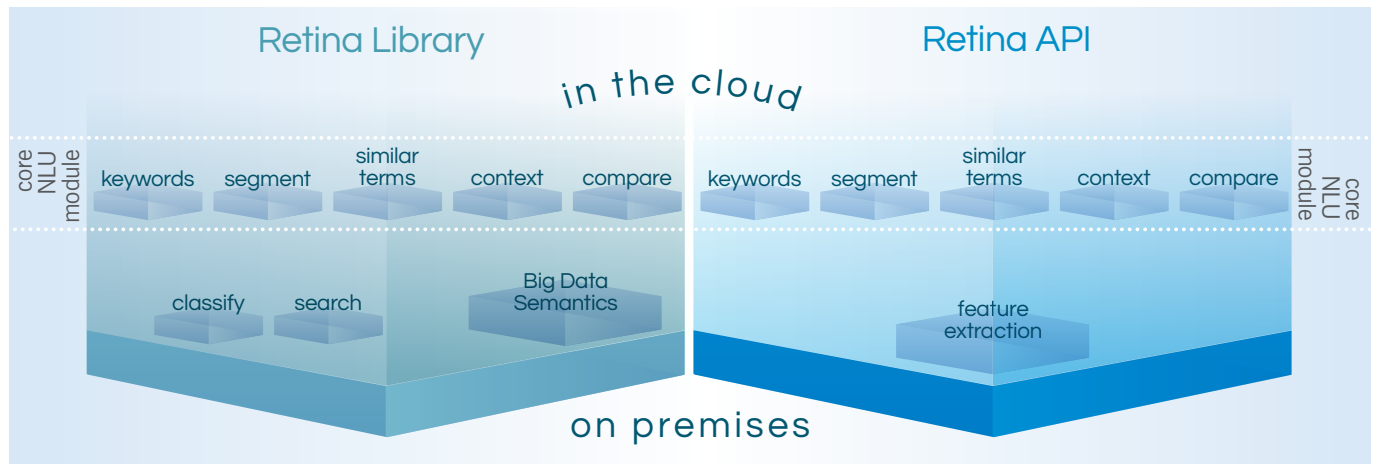


Retina Platform: the core engine

Cortical.io has wrapped its Retina Engine into an easy-to-use, powerful platform for text filtering, classification and searching that operates on the semantic rather than keyword level.

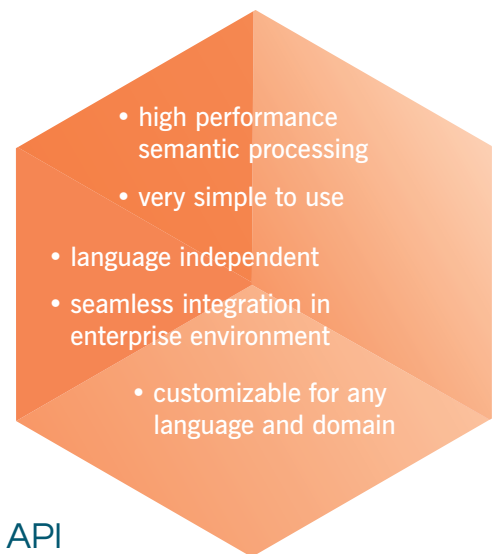
Cortical.io's core engine is accessible via the **Retina Library** and the **Retina API** and can be run in the cloud or on premises. It can be extended with custom databases and functional applications.

The Retina Platform can process any kind of text, independently of language and length. Because of the high computational efficiency of its core engine, it enables you to process terabytes of data orders of magnitude faster than other methods.



Both **Retina Library** and **Retina API** feature the core Natural Language Understanding functionalities of the Retina Engine:

- Conversion of words or text items into semantic fingerprints
- Computation of Boolean operations with semantic fingerprints (semantic expressions)
- Text functions like segmentation, keyword extraction, parsing, identification of contexts and similar terms
- Comparison of semantic fingerprints
- Decoding context words of semantic fingerprints
- Access to Retina Database General English



Additional functions and technical aspects:

Retina Library

- Semantic search module
- Classifier module (dynamic generation of classifiers)
- High performance semantic processing module (Spark)
- Access via a Java and Scala API
- Integration in Apache Spark or in single-node Java runtime environments
- Usable with on premises or in the cloud Spark clusters (Cloudera, Amazon EMR)
- Cloudera certified
- Support all Hadoop storage formats

Retina API

- Feature extraction for semantic classification and filtering
- Access via a REST API
- Java, JavaScript and Python client libraries
- Sandbox API available at api.cortical.io
- Free public API available at www.cortical.io
- Available as private API instance on Amazon Web Services
- JSON data format

Retina Platform: the extensions

Once you access Cortical.io's Retina Engine via the Retina Library or the Retina API, you can augment its functionality with customized databases and applications.

Retina Databases

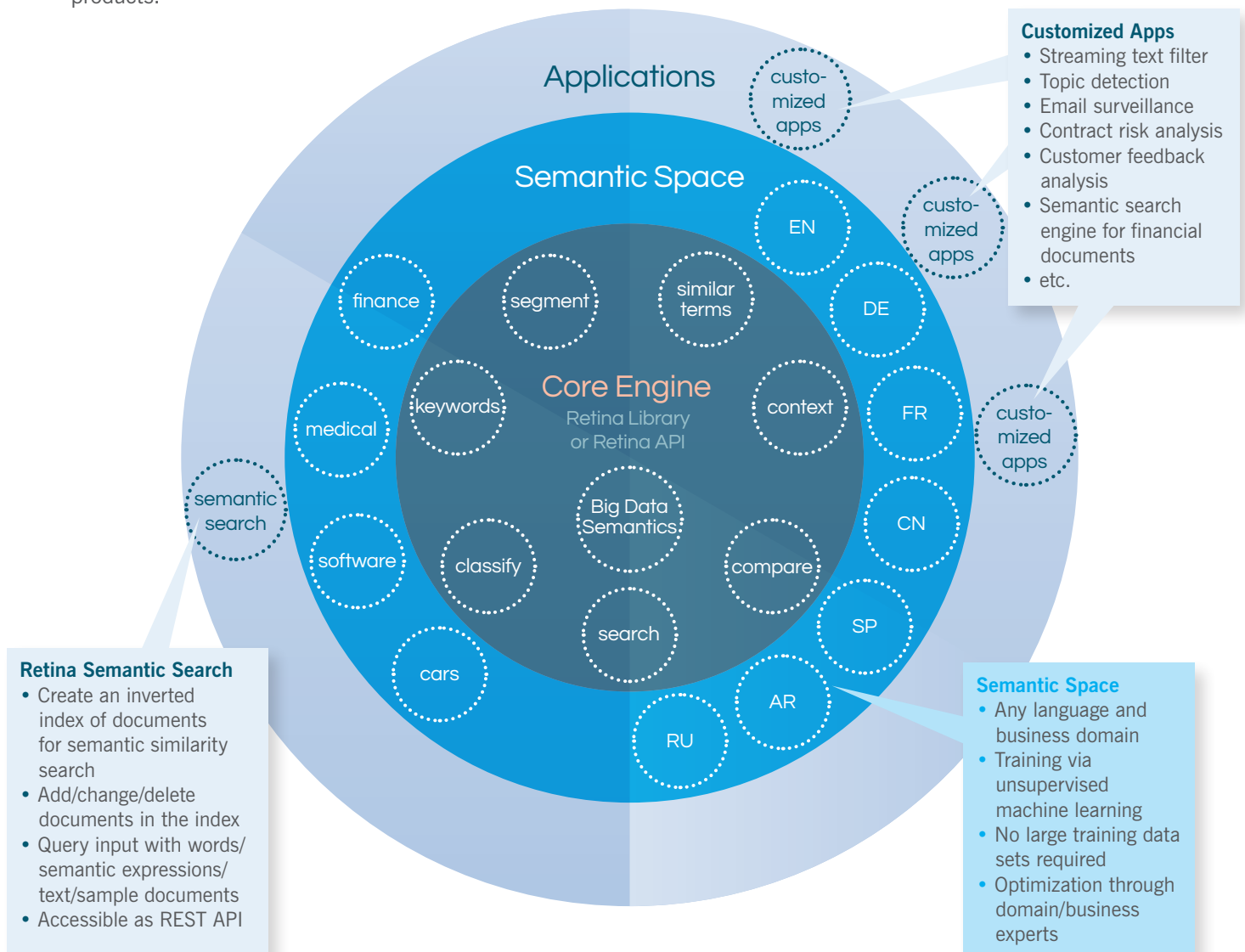
Unsupervised machine learning methods are used to train the Retina's semantic body of knowledge. Cortical.io has several base Retina Databases which can be refined into domain- and jargon-specific databases using reference material (encyclopedia, ontologies, dictionaries), web content (by using semantic crawlers) or any other domain-specific text data.

Applications of the Retina Engine

The Retina Library and Retina API serve as a central resource for a multitude of different applications.

Parallel Rollout Process:

- Development of one or more Retina Databases which cover the required semantic spectrum.
- Development of Retina Engine-based applications which offer functional solutions for different enterprise domains or products.



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