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Natural language processing | Internal addendum

(This document is an internal companion addendum to the client-sharable primer on natural language processing.)

Natural language processing solution providers

While **enterprise cloud providers** offer **sophisticated and continually improving** NLP application programming interfaces (APIs) that can be configured easily for custom solutions, **off-the-shelf product vendors** are offering **packaged solutions** suitable for standardized documents such as forms, agreements and contracts.

Deloitte Risk and Financial Advisory is extensively leveraging vendor solutions and open source tools (some listed below) to build custom NLP-based solutions for clients. In addition, Deloitte has several in-house NLP tools such as Blab, Convergence, Brainspace, Relativity, Vista, and ACADA to solve client challenges across risk management.

Language **Topic or** Natural **Entity** Sentiment Language Text **Capabilities** detection and document language generation extraction analysis summarization translation classification querying Software application **onetowl** ATTIV/O opentext* narrative 2 science **♥ PRIMER** (i) iTranslate providers (illustrative) 000 **MELIA** Offer on-premise **S**sas agolo **ARRIA** SYSTEM and cloud-based EXPERT SYSTEM **SPEECH**MATICS solutions 🕻 squirro cortical.io ADLIB. yseop³ netowl **Cloud service** providers aws aws aws Offer plug and play Azure NLP capabilities Comprehend API Comprehend API CloudSearch Text Analytics API through APIs along with automated ML capabilities for NLP Google Cloud Platform Cloud Natural Azure Language API Text Analytics API Open Source tools Provide flexibility nlglib 0.2.1 to use custom NLP

What are some interesting NLP offerings from our competitors?

spaCy

Prominent vendors



libraries and algorithms

Deployed AI to review **lease accounting standards**. Using NLP to extract information and a human-in-the-loop to validate the results, the NLP system is three times more consistent and twice as efficient as previous humans-only teams.



Developed Infosphere Regulatory Accelerator (IIRA), a regulatory on-ramp tool that leverages NLP to help businesses understand **requirements within regulations** and adapt to changes. Uses ML to map business terms to regulatory terms to identify connections between sections of regulations and business processes.



Partnered with Narrative Science to build a natural language generation tool, **KYC report generation** to identify potentially high risk customers.



Leveraged NLP to accelerate benchmarking of clinical guidelines which resulted in a 60% decrease in time consumed to synthesize clinical guidelines.

How can Deloitte Risk and Financial Advisory (RFA) help clients use NLP?

How to identify use cases that are suitable for NLP?



Educate clients about NLP capabilities and how it can help them with risk management



Help clients identify use cases and assist them to develop, implement, and manage NLP solutions



Help clients effectively mitigate risks introduced by NLP



TextBlob

Does your client need to report to stakeholders periodically in a consistent format?



Does your client need to analyze lengthy documents like contracts and agreements to extract relevant information?



Does your client handle a lot of questions that require referencing numerous, complex policy documents?



Does your client need to monitor customer communications, employee communications, or social media posts to look for potential issues?



Key contacts:

Feel free to reach out to the contacts below if you wish to know more, or to share interesting use cases.

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