

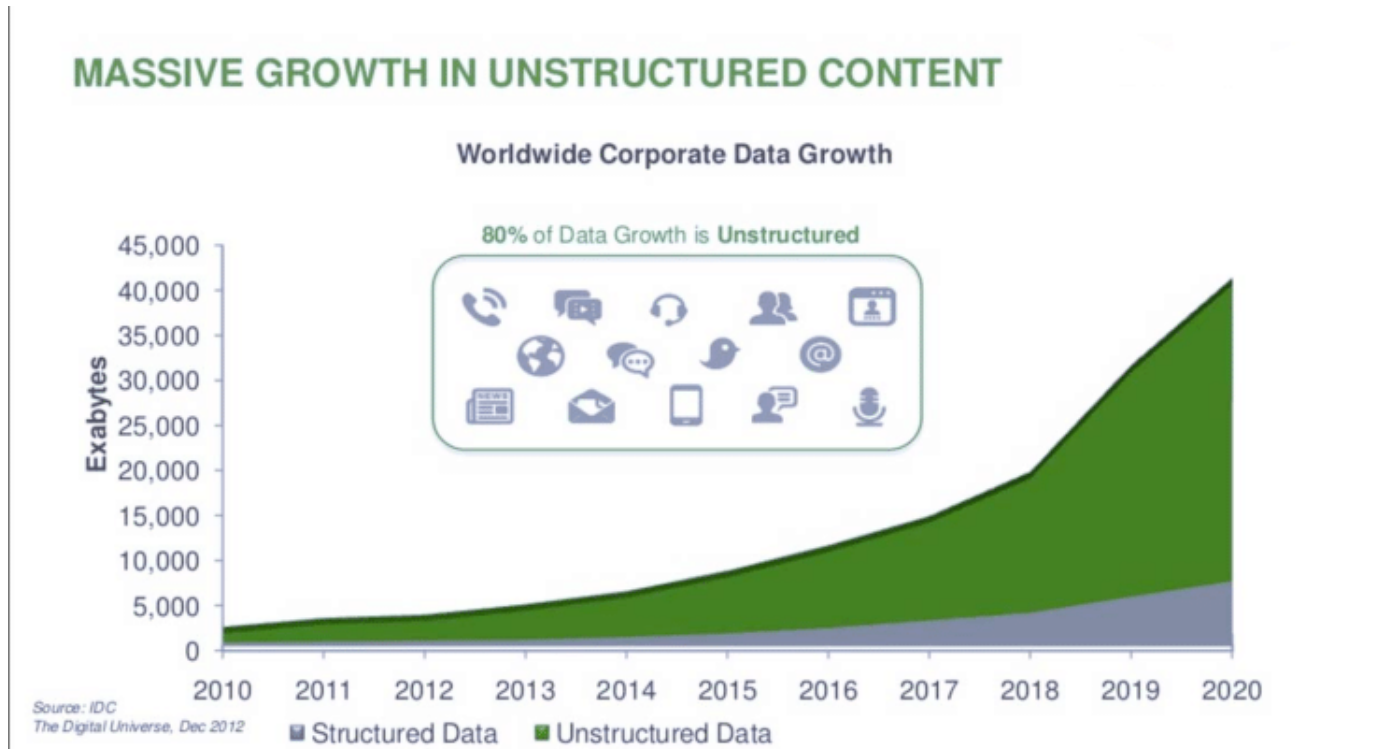
Article

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[Open Exchange](#)

## Enrich your analytics projects with NLP

According IDC, 80% of all data produced are NoSQL. See:



There are digital documents, scanned documents, online and offline texts, blob content into SQL, images, videos and audio. Imagine a Corporate Analytics initiative without all these data to analyze and support decisions?

In all the world, many projects are using technologies to transform these NoSQL data into textual content, to allows analyze it. See:

1. Scanned images and images with text extracted using OCR (Google Tesseract is a great option);
2. Videos analyzed with Visual Computing supported by Machine Learning (OpenCV is a good option) and transforming the results into JSON or XML dataset results;
3. External content from Internet and Social media scraping using Python and storing results into textual content.

All these content extracted are stored into text, and could be analyzed with NLP engines, like InterSystems IRIS Text Analytics (iKnow).

There are some options to do this:

1. Store textual data extracted to a table and create a NLP Domain to this table, see:

Server 9843a27a7696 Namespace IRISAPP [Switch](#) User \_SYSTEM Licensed To InterSystems IRIS Community Instance IRIS

Analytics > Text Analytics > Domain Architect - (dc.ocr.OcrNLP)

## Domain Architect

[New](#) [Open](#) [Save](#) [Compile](#) [Build](#) [Delete](#)

**Model Elements** [Expand All](#) [Collapse All](#)

**OcrNLP ( ID: 1 )** **Element Type**

- ▼ Domain Settings
- ▼ Metadata Fields

filename	STRING	✖
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- ▼ Data Locations

OcrNLPTable	Table:[dc_ocr.OcrTable]	✖
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- ▼ skiplists
- ▼ Matching

**Details** **Tools**

Select an item on the left to view and edit its properties

Name  
OcrNLPTable

Batch Mode ☒

Schema  
dc\_ocr

Table Name  
OcrTable

ID Field  
ID

Group Field  
ID

Data Field

2. Use NLP API to send extracted text to NLP in realtime, see:

```
$SYSTEM.iKnow.IndexString("OcrNLP", pRequest.FileName, pRequest.Text, , 0, .src)
```

3. Save extracted text to text files and set data location to files folder.

4. Create RSS channel to NLP consume the text extracted.

Now, with your NLP configured you can analyze the results, see:

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▼

⚙

**Top Concepts** [frequency](#) [dominance](#)

regular	15	1
os	13	1
fraude	6	1
area	5	1
quick brown dog	4	1
lazy fox	4	1
bom	4	1
05	4	1
consulta	2	1
modeloiafraudeaqua	2	1

**Similar Entities**

quick brown dog	4	1
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**Related Concepts** [related](#) [proximity](#)

lazy fox	4	1
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**Sources** **Paths** **CRCs** **CCs**

1 :TEMP:testocr.png The quick brown dog jumped over the lazy fox. ... The quick brown dog jumped over the lazy fox. ... The quick brown dog jumped over the lazy fox. ... The quick brown dog jumped over the lazy fox. ...

With no effort, IRIS did the ranking of concepts, cluster similar entities (things, facts, names, substantives) and created the relationships between entities (concepts), the CRC - Concepts/Relations/Concepts. It was possible analyze the path to reach a concept and could be used colors to know features like sentiments, negations and other features, including features modeled into a custom dictionary.

To training and refine results, IRIS NLP use dictionaries, like

it: <https://github.com/intersystems-community/irisdemo-demo-twittersentiment...>

Finally, the analysis may be consumed using IRIS native API with Java, .NET, Python and Node.js. Can be consumed as REST API too, see: <https://docs.intersystems.com/irislatest/csp/docbook/Doc.View.cls?KEY=GI...>

To see all details see these projects:

1. <https://openexchange.intersystems.com/package/Twitter-Sentiment-Analysis...>
2. <https://openexchange.intersystems.com/package/COVID-19-iKnow-Content-Nav...>
3. <https://openexchange.intersystems.com/package/OCR-Service>

[#Analytics #InterSystems IRIS](#)

[Check the related application on InterSystems Open Exchange](#)

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