

Phrase detection

Detecting critical or forbidden phrases

Important documents and contracts typically need scanning to check for forbidden or critical phrases.

The phrase detection model scans a set of textual documents, looking for specific pre-defined phrases in a semantic sense.

The Challenge

Law firms and unions are often confronted with reviewing contracts, checking for certain phrases that should or should not be included. This process is time-consuming and tedious, and in some circumstances, content gets overseen.

With an automatic phrase detection, companies get a quick overview of which document might contain critical information, reducing time spent - meaning fewer costs and lower risks.

Data - Your Documents And Phrases

Building a model that automatically screens for critical or forbidden phrases requires data from historical documents from your organization and phrases for the model to screen. This data includes:

- Documents that should be checked
- Phrases and text parts not contained in the documents

The text needs to be supplied together with the phrases. The historical data is typically found in databases via a connection, an API, or as .csv files. The predictions are generated by sending a JSON request to the model's API and receiving a list containing the prediction.

Model – Phrase Detection

We use Natural Language Processing (NLP), followed by a similarity search model. The model measures specific phrases and words in textual documents and produces a score of how much of a phrase's frequency. The model is deployed using the auto-deployment functionality in our enterprise AI platform, Grace. After the deployment, data is sent via a POST-end-point of an exposed API to the model.

The phrase detection model is available as a Grace Standard Model. It is the fast track to your first AI model implementation without sacrificing future flexibility or extensibility for scaling AI across your organization. We maintain 70% ready-made algorithms and fitted to your client's messages and target groups.

3 Facts About The Model

1

Phrase detection as a standard model is a fast track to AI model implementation.

2

The model uses predefined phrases to screen texts.

3

By using the model, you get a quick scan of your documents' content to identify forbidden phrases.

Detection Of Critical Phrases

When buying the Grace phrase detection model, the detected phrases per document, similarity score, and the core key words are stored and visualized in a BI-tool. In addition to the historical predictions, the Grace Standard Model for phrase detection also delivers the reason for a given prediction, helping you understand why certain phrases may be problematic. In this case, 2021.AI can help set up the BI dashboards to give customer service an updated overview (e.g., in Power BI).

Our Solution

2021.AI's phrase detection model uses an unsupervised NLP algorithm to scan documents and detect critical phrases. The mathematical model is trained to process text from the document and detect words, word combinations, and semantics.

The model stores which phrases are contained in which documents, and which content of the

document is most likely to relate to a phrase. While detecting phrases, the model also produces insights for each detection. The model is no longer a black box, but instead, we know the textual content that drives the model prediction. We store these insights alongside the predictions to be re-used and displayed in a BI dashboard for further analysis. All of this is anonymized, without any link to the detailed context.

The Business Outcome

Using the Grace Standard Model for phrase detection, the customer gets an overview of documents that might contain critical phrases that are missing essential phrases. The company can use this to investigate contracts and documents more efficiently and act in accordance. Furthermore, the company gets insights into what makes the model detect phrases, which can control content and relevancy.

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