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Contract analysis: demo

Advanced AI for efficient document search and analysis

Our contract analysis tool gives the lawyer or business owner to examine the contract faster, by looking on only the important conditions. The solution is available as web application, extension for MS Word* is in development.

Technology stack: Python, NLP, Sklearn, FastAPI, LabelStudio, Docker.

The screenshot shows the 'Contract analysis tool' interface. The main content area displays a contract document with several clauses highlighted in orange and green. The highlighted text includes:

- (b) Governing Law. This Agreement shall be governed by, construed and interpreted in accordance with the laws of the State of New York, without regard to principles of conflicts of law.
- (d) Assignment. This Agreement shall be binding upon the parties hereto and their respective successors and assigns, provided that this Agreement may not be assigned, or otherwise transferred, in whole or in part, by either party without the prior written consent of the other party, which the other party will not unreasonably withhold, condition or delay; and provided further that (i) consent is not required for an assignment to an affiliate of Agent and (ii) any reorganization, merger, consolidation, sale of assets or other form of business combination by Agent shall not be deemed to constitute an assignment of this Agreement.

The sidebar on the right, titled 'CONTRACT CLAUSES', lists the following clauses with their status:

- Select all clauses (checked)
- Parties (checked)
- Renewal Term (checked)
- Cap On Liability (checked)
- Governing Law (checked)
- Anti-Assignment (checked)
- Change Of Control (checked)
- License Grant (checked)

You can test our Contract analysis: <https://contracts.silkdata.ai/>

Purposes

To make the process as convenient as possible, we focus on specific goals:

- Create a kind of automatic assistant or a 'spell-checker' for legal experts. This product is intended for both experienced professionals and junior specialists. Professionals can relieve the stress of monotonous work by optimizing this process. While the main benefit for beginners is practice in seeing key points in contracts.
- Fast onboarding. We wanted to create a ready-made solution for small or medium-sized businesses.
- Flexibility. Support of different languages and legislatures.

Key takeaways

- 300 contracts are checked a week
- About 10% recurring users
- Positive feedback
- Analysis of user activity and suggestions



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Steps

Step 1. Contract classification

To determine the type of contract accurately, Silk Data uses a mixed approach. Firstly, we start with the contract and analyze it with Machine Learning model. This step defines if it is a service contract or not. The next step is where hand-crafted rules appear. With the help of specific patterns, it can tell the slight difference between supply and purchase contracts. A mixed approach with Machine Learning model and hand-crafted rules allows to achieve better performance results. It ensures high classification accuracy, ca. 90%.

Step 2. Clauses classification

After determining the contract type, models of legal concepts and document segmentation find important clauses in the contract text.

Step 3. Legislation

The legislation purpose is to confirm clauses with the expert-provided links. Currently, we are developing automated suggestions for law provisions and edits.

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Results

The primary outcome is provided web interface makes it easy for business to upload and analyze DOCX and PDF contracts. You can test our MVP [here](#).

Silk Data is also developing a special MS Word add-on to bring the Contract Analysis directly to the typical tool of an office worker. The idea of the extension is to make minimal intrusion into the document, only selecting the important provisions. Processing of DOCX and PDF files can be added to the web interface on demand.



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