## Case Summarization and analysis

## **OBJECTIVE**

- To improve the way Legal Documents and Terms and Conditions contracts are presented and analyzed.
- Provide a comprehensive and easy to understand summary of legal documents and analytics of the text, allowing a deeper insight into it for the reader

### The Problem

- Legal document are often too long, tedious and confusing.
- Some terms and conditions can be easily overlooked.
- Predatory agreements can legally entrap people
- Time consuming and often has insignificant details.
- Legal jargons cannot be understood by the average human

## OUR SOLUTION

We present a web application that accepts a legal document (preferably proceedings of a court case, terms and conditions document) IN TXT FORMAT, and using various Artificial Intelligence, Machine Learning and Natural Language Processing Algorithms, comprehends it and generates a concise summary of the document and recognises the key legal points (for instance, names and locations involved, important sentences).

We also provide a plugin version specifically trained for privacy condition summarization which provides an analysis of the complexity and readability of the terms and the most important sentences in the document

## OUR SOLUTION

#### Usage

Just upload the legal proceedings of the case IN THE FORM OF A TXT FILE (no other formats are supported as of now).

We then provide you with the following:



## Original Document With Highlighting

We identify the key points and highlight them, making you focus more on the important things when reading a large legal document



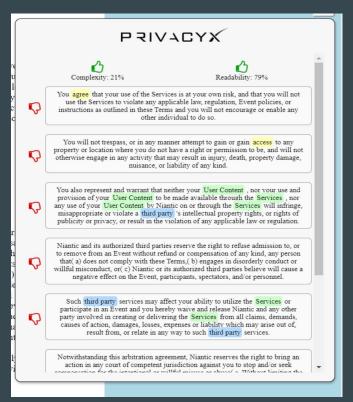
#### Summarized Document

We comprehend the document and prepare a concise summary that briefs you on the sum and substance of the document



#### QnA Bot

Our Question Answer bot answers some simple queries about the document. It can list the important points, give you a very short rundown of the document or summarise it in a little more detail.



## DELIVERABLES

A webapp to upload the legal documents and get abstractive and extractive summaries.

An interactive chatbots to ask queries regarding the document.

Informatics regarding the document.

A plugin that gives the relevant important information for terms and conditions documents.

Highlighted Keywords in the document.

## SOFTWARE REQUIREMENTS - WEBAPP





This is used for the frontend for the web page and to provide the required functionality



It is a Python-based free and open-source web framework, which follows the model-template-view architectural pattern. We use this for development of our application.



Language Understanding (LUIS) is a cloud-based API service that applies custom machine-learning intelligence to a user's conversational, natural language text to predict overall meaning, and pull out relevant, detailed information. This is used for the chatbot framework and is trained on specific arguments



Microsoft Bing Speech API is a cloud-based API that provides advanced algorithms to process spoken language, it allow developers add speech driven actions to their applications including real-time interaction with the user. This is used for Speech to Text and Text to Speech, thus enabling the bot to work with voice as well



Libraries for making model

Microsoft Program Synthesis using Examples SDK

Given a domain-specific language (DSL) and input-output examples for the desired program's behavior, PROSE synthesizes a ranked set of DSL programs that are consistent with the examples. This is used for the key highlights of the document.

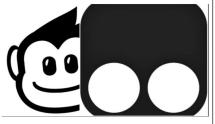
## **SOFTWARE REQUIREMENTS - PLUGIN**



This was used for the frontend for our application



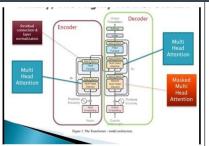
Flask is used for the backend server which communicates with the front-end through REST API



TamperMonkey was used as the userscript to create the required plugin for our application



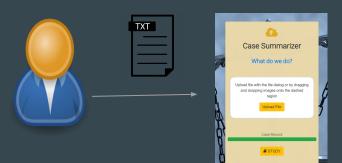
Pytorch was used for the creation of the Transformer Model and extractive summarizer



BERT is used as a transformer model, fine tuned to the specific domain and thus it helps us better understand legal data



Libraries for making model



# DOCUMENT STUDIED! We have read and understood your document, highlighted the key points and summarised it for you. You can also ask questions to our bot highlighted that the highlighted text of the summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for you. You can also ask questions to our bot summarised it for your hand.

#### Type of the Document

Central Administrative Tribunal

#### Names of People Involved

Bhattacharya, Branch Manager, Near Jawahar Nagar, Local Head Office, Manjula Prasher, Bhikaji Cama Place, Bhopal LHO, Shri Prabhat Chand, Jabalpur, Mohapatra, Registrar Ph, Zonal Office, Shri Vinay, Shri Shridhar Rao, Vijay Nagar, Jaiprakash Nagar, Kumar Malviya

#### Locations of Importance

India, Jabalpur, Mumbai

#### Organizations Involved

Commission, CBI, State Bank, SBI, CPIO, RTI, FAA

#### Highlighted report of eg

Mrvijay Kumar Malviya vs State Bank Of India on 8 January, 2015 Central Information Commission

Room No.307, II Floor, B Wing, August Kranti Bhawan, Bhikaji Cama Place, New Delhi110066 websitecic.gov.in

> Appeal: No. CIC/MP/A/2014/000338 No. CIC/MP/A/2014/000340 No. CIC/MP/A/2013/000020 No. CIC/MP/A/2014/001261

Appellant : Shri Vijay Kumar Malviya, Jabalpur Public Authority: State Bank of India, Jabalpur/Bhopal/Mumbai.

Date of Hearing: 08th January, 2015 Date of Decision: 08th January, 2015

Present:

#### Summary of eg

#### fraud and file FIR with CBI.

The CPIO, SBI, Jabalpur vide letter dated 20.11.2013 informed the appellant on Point 1 and 2 that the matter was being investigated by the CBI and denied information under the provisions of Section 8(1)(h) of the RTI Act. Dissatisfied with the reply of the CPIO, the appellant filed first appeal on 0.2.2013 before the FAA.

2. The appellant, Suri Yijipi, Kamar Mahiyu, submittle RT application dated 0., 06.203 before the Central Public Information Officer (CPIO), State Bank of India (SBI), Bhopal and sought five documents relating to CBI cases No. RC009201100004, & RC009201140001, letter under cover of which draft sanction onted along with enclosures received by LHO, note put up by functionary concerned to the CRM/CMA/A. (R Ibadque Iter date 26.8.2012, note put up by the functionary concerned to CcM/CMA/AA and CBI, Jabalquet and Letter and Letter (TRA) and Letter and Letter (TRA).

3. The appellant, Suri Yijipi Kamer Mahiyis, submitted ETT application dated L. 67, 20/3 before the Central Public Information Officer (CPID), State Bank of India (SBI), Blogad seeding information on six points such as investigation reports submitted by various officials of SBI, note approved by competent authority regarding vigilancy-inon-vigilance, documents pertaining for first stage advice, first stage advice resulted, for stage advice sought, second stage advice resulted, second stage advice resulted, second stage advice resulted, action and stage advice sought, second stage advice resulted in the stage of the sought of the superior of the stage advice sought, and the stage advice sought in the submitted of the submitted of the superior of the submitted of

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#### Niantic Terms of Service

Please also review Niantic's updated Privacy Policy that takes effect on December 13, 2019.

Last Modified: May 15, 2019

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#### Terms

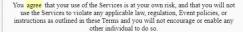
Welcome to Niantic. We publish real-world augmented reality mobile experiences, including mobile game applications ("Apps"), and operate a real-world augmented reality platform ("Platform"). Please read these Niantic Terms of Service and any applicable App guidelines (the "Guidelines" and, collectively, "the Terms"), because the Terms govern your use of the Apps and Platform. The Terms also govern your interaction with any websites we own or operate ("Sites"), purchase of any Niantic

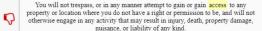
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Readability: 79%





You also represent and warrant that neither your User Content, nor your use and provision of your User Content to be made available through the Services , nor any use of your User Content by Niantic on or through the Services will infringe, misappropriate or violate a third party 's intellectual property rights, or rights of publicity or privacy, or result in the violation of any applicable law or regulation.

Niantic and its authorized third parties reserve the right to refuse admission to, or to remove from an Event without refund or compensation of any kind, any person that(a) does not comply with these Terms,(b) engages in disorderly conduct or willful misconduct, or(c) Niantic or its authorized third parties believe will cause a negative effect on the Event, participants, spectators, and/or personnel.

Such third party services may affect your ability to utilize the Services or participate in an Event and you hereby waive and release Niantic and any other party involved in creating or delivering the Services from all claims, demands, causes of action, damages, losses, expenses or liability which may arise out of, result from, or relate in any way to such third party services.

Notwithstanding this arbitration agreement. Niantic reserves the right to bring an action in any court of competent jurisdiction against you to stop and/or seek

## THANK YOU

TEAM RITU SINHA POOJA KUMARI KRUTHIKA K