

Jonathan PISCART

Ruxi HE

Riccardo RAVELLO

Tianchi ZHAO

Shiyu MAO

Juliette LACROIX

# HACKATHON

GROUP 6



**ESSEC**  
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**Ekimetrics.**



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# OUTLINE

ClimateQA Overview  
Context & Problematic  
Team Presentation  
Solution  
Proposed Interface

# CLIMATE QA OVERVIEW

ClimateQA by **Ekimetrics**.

Open source chatbot based  
on referenced reports.

Focus on climate-related  
questions.

The screenshot displays the ClimateQA web application interface. At the top, there is a navigation bar with links: "ClimateQ&A", "Figures", "Papers (beta)", and "About". The main chat area shows a user question: "What is climate change?". Below the question, the chatbot provides a detailed answer: "Climate change is defined as a change in the state of the climate that can be identified by statistical tests, involving changes in the mean and/or variability of its properties over an extended period, typically decades or longer. This change may be due to natural internal processes or external forcings such as modulations of solar cycles, volcanic eruptions, and persistent anthropogenic changes in the atmosphere or land use. The United Nations Framework Convention on Climate Change (UNFCCC) specifically defines climate change as a change directly or indirectly attributed to human activity that alters the composition of the global atmosphere, distinct from natural climate variability observed over comparable time periods <sup>345</sup>. In simpler terms, climate change refers to alterations in the climate system that are influenced by human activities and natural factors, leading to long-term shifts in temperature, precipitation patterns, and other climate-related variables. It is a phenomenon that can have significant impacts on both human and natural systems". To the left of the text is a small circular logo with the letters "up". Below the chat area is a text input field with the placeholder "Ask me anything here!". On the right side of the interface, there is a sidebar with tabs: "Examples", "Sources", and "Configuration". The "Sources" tab is active, showing a document titled "Doc 1 - IPCC AR6 WGII SPM - Page 7". The document text reads: "fair relations within society that seek to address the distribution of wealth, access to resources, opportunity and support according to principles of justice and fairness. Climate justice comprises justice that links development and human rights to achieve a rights-based approach to addressing climate change. 15 Maladaptation refers to actions that may lead to increased risk of adverse climate-related outcomes, including via increased greenhouse gas emissions, increased or shifted vulnerability to climate change, more inequitable outcomes, or diminished welfare, now or in the future. Most often,".

# CONTEXT & PROBLEMATIC



## PROBLEM 1

No translation available other than the language used in the question

Lack of possibility to choose the language

Expliquez moi la notion de changement climatique en anglais.

Le concept de changement climatique peut être défini comme un changement dans l'état du climat qui peut être identifié par des changements dans la moyenne et/ou la variabilité de ses propriétés et qui persiste pendant une période prolongée, généralement des décennies ou plus<sup>689</sup>. Ce changement peut être dû à des processus internes naturels ou à des forçages externes tels que des modulations des cycles solaires, des éruptions volcaniques et des changements anthropiques persistants dans la composition de l'atmosphère ou dans l'utilisation des terres<sup>689</sup>.

## PROBLEM 2

Low filters availability

The screenshot shows a web interface with three tabs: 'Examples', 'Sources', and 'Configuration'. The 'Configuration' tab is active. It contains the following sections:

- Select source:** Three toggle buttons for 'IPCC' (checked), 'IPBES', and 'IPOS'.
- Or select specific reports:** A dropdown menu.
- Select audience:** A dropdown menu with 'Experts' selected.
- Query used for retrieval:** A text input field containing the query 'Can you explain the concept of climate change in English?'.

# CONTEXT & PROBLEMATIC



## PROBLEM 3

Quel est le rôle du méthane dans le réchauffement climatique ?

Pourquoi faut-il réduire nos émissions de méthane ?

comment réduire le méthane ?

Quelles émissions pour un CV1

comment aider une entreprise à réduire ses émissions carbone ?

En combien de temps le méthane s'estompe de

## PROBLEM 4

On a short answer, what is Climate Q&A?

In a short answer, how does Climate Q&A bot work?

What's my carbon footprint by taking a short flight?

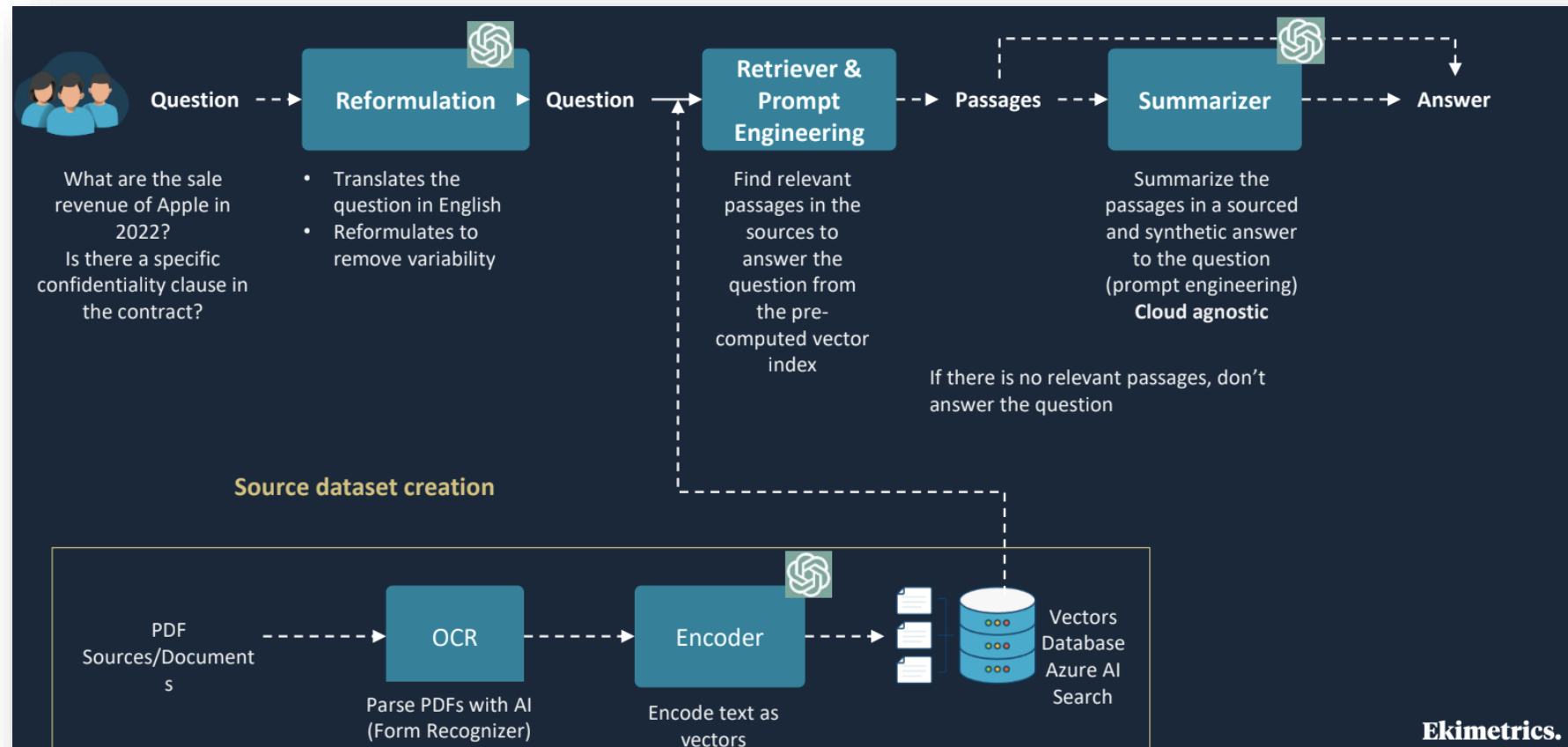
in a short answer with five bullet points, give me the reasons that caused climate change?

in a short answer with three bullet points, give me the reasons that caused climate change?

at which periods of time do we have significant increase in short period of time of co2 except the pre-industrial time

# GENERATIVE PIPELINE

## PROBLEM IDENTIFICATION



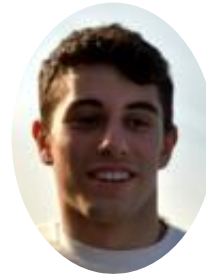
# OUR TEAM

➔ An international team



**Jonathan PISCART**

FR



**Riccardo RAVELLO**

IT



**Ruxi HE**

CN



**Tianchi ZHAO**

CN



**Shiyu MAO**

CN



**Juliette LACROIX**

FR

# PROPOSED SOLUTION

## IMPROVED CONFIGURATION INTERFACE

FEATURE 1 – CUSTOMIZED LENGTH

FEATURE 2 – TRANSLATION AVAILABILITY

FEATURE 3 – TARGETTED AUDIENCE

FEATURE 4 – TONE PERSONALIZATION







# FEATURE 1 – CUSTOMIZED LENGTH

- Offering the possibility for users to choose the length of the answer
- User-friendly interface with 5 levels

A user interface for selecting the length of an answer. It features a list of five options: 'Very short', 'Short', 'Medium', 'Long', and 'Very long'. The 'Very short' option is highlighted with a light blue background. Below the list is a text input field with a blue border and a small blue downward arrow on the right side, indicating a dropdown menu.

Very short

Short

Medium

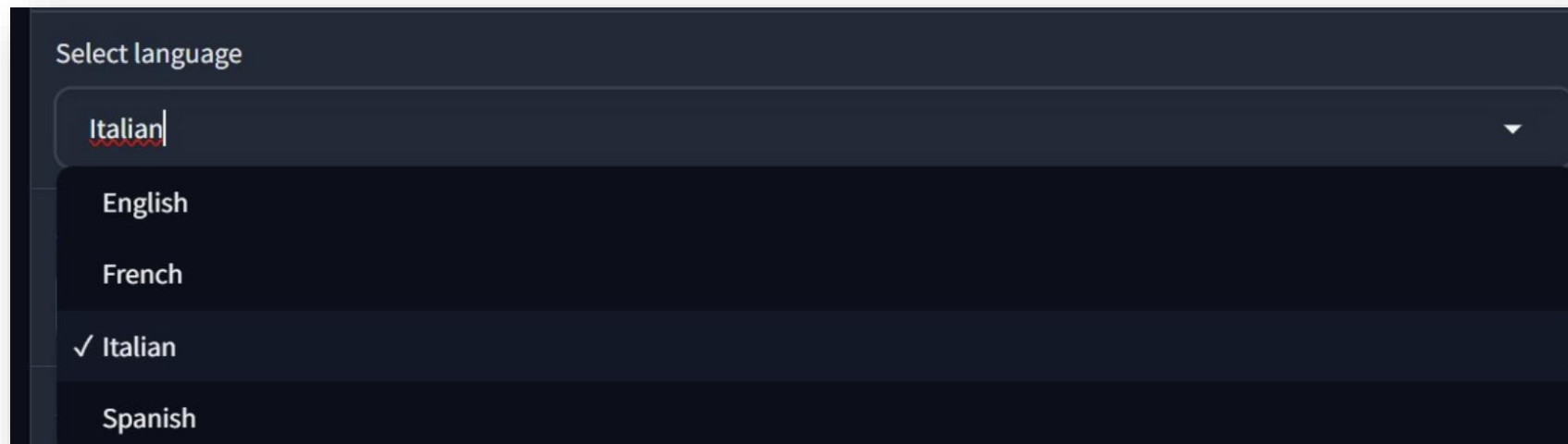
Long

Very long



## FEATURE 2 – TRANSLATION AVAILABILITY

- Offering the possibility for users to select the language of the answer
- User-friendly interface





## FEATURE 3 – TARGETTED AUDIENCE

Select audience

Dramatic

Informal

Formal

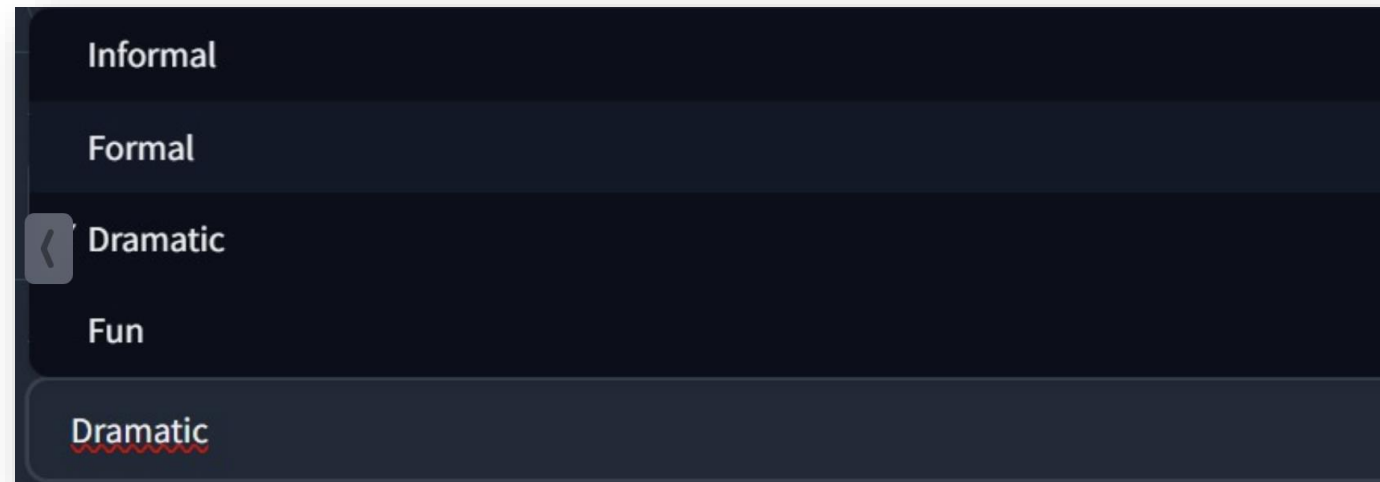
✓ Dramatic

Fun

Dramatic



# FEATURE 4 – TONE PERSONALIZATION



Select response length

Long

Select language

Italian

Select audience

Children

Select audience

Dramatic

What is climate change?

What is climate change?

### Il tempo è cambiato!

Ciao ragazzi! Oggi parleremo di un tema molto importante: il cambiamento climatico. Ma cosa è esattamente il cambiamento climatico?

Secondo i nostri documenti, il cambiamento climatico è il cambiamento nella temperatura media globale della Terra causato dall'emissione di gas serra, come il metano e l'anidride carbonica, nell'atmosfera. Questi gas serra bloccano la radiazione solare e riscaldano la Terra, portando a cambiamenti climatici.

Secondo Rose Abramoff, del Laboratoire des sciences du climat et de l'environnement (LSCE) in Francia, "il riscaldamento globale è aumentato di 0,75°C dal 1880 al 2012" [Doc 1, Doc 2]. Questo aumento della temperatura media globale è un segnale chiaro del cambiamento climatico.

# FINAL INTERFACE PRESENTATION



# THANKS

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