

# NewSearchPedia

**News Trends at a Glance:  
From Summaries to Background Knowledge**

# 엘엠엔오피(LMNOP) Pioneers

알파벳 한 자 한 자 배워나가듯 LLM을 처음 공부하는 신생아들 😊

Hi there 🙋

## 👤 구성원 소개

이름	전공	학년	깃헙
이하람(팀장)	소프트웨어학과	4	
김대성	소프트웨어학과	3	

김수연

소프트웨어학과

4



이유진

경영정보학부

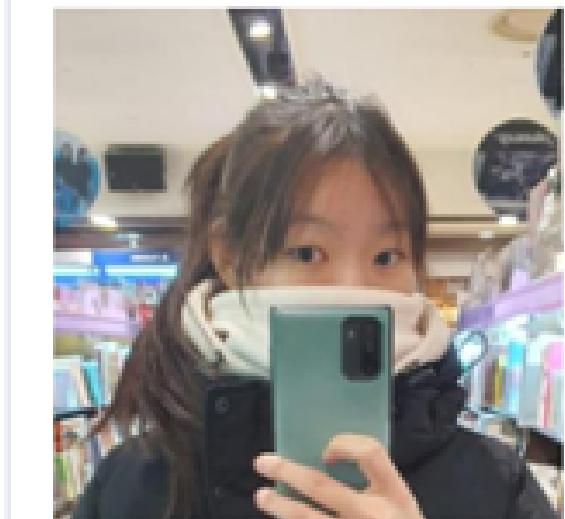
3



이지안

AI빅데이터융합경영학과

2



Team LMNOP

<https://github.com/2024-summer-LLM-Bootcamp>

# I

## Project Motivation

## Background

일론 머스크의 X, 뉴스 요약 서비스 시작...xAI의 생성 AI '그록' 활용

블룸버그, '어닝콜' 뉴스 요약 AI 서비스 내놨다

[공병호의 파워독서] 정보 과부하의 시대...  
소비자 선택의 폭 좁혀라

[교육칼럼] 요즘 아이들의 낮아진 어휘력, 어떻게  
하면 높일 수 있을까?

# I Project Motivation

## Information Overload Issue

In modern society, the amount of information is increasing explosively. Every day, millions of web pages, tweets, and videos are created, making it difficult for users to find the information they need.

## Increasing Demand for AI News Summarization Services

The development of news summarization services by various companies like Google News, Summari, and Inshorts indicates a high demand for these services.

## Need for Rapid Information Delivery

The advancement of AI technology emphasizes the need for fast and accurate information delivery.

## Educational Approach to Vocabulary Issues

There is a rising concern about the vocabulary levels of today's students and youth, necessitating the development of methods to address this issue.

## II Project Overview

# "News + Search + Pedia"

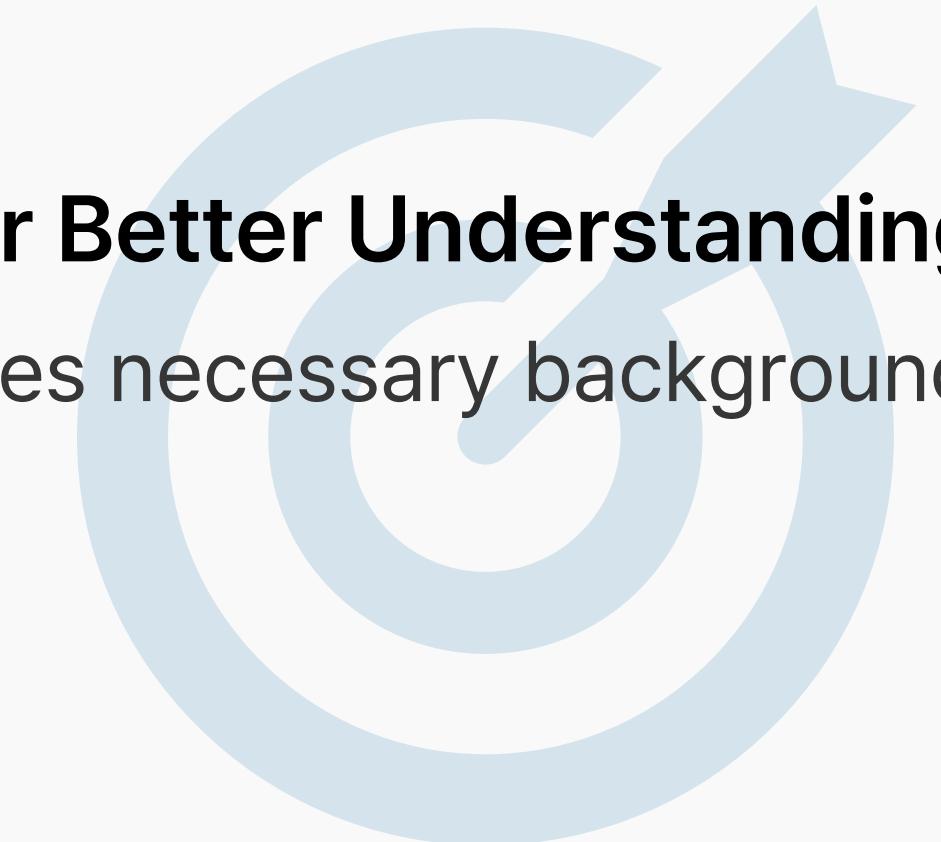
### **1. Providing an Overview of News Trends**

→ AI summarizes based on **News Search**, allowing users to see trends at a glance.

### **2. Offering Background Knowledge for Better Understanding**

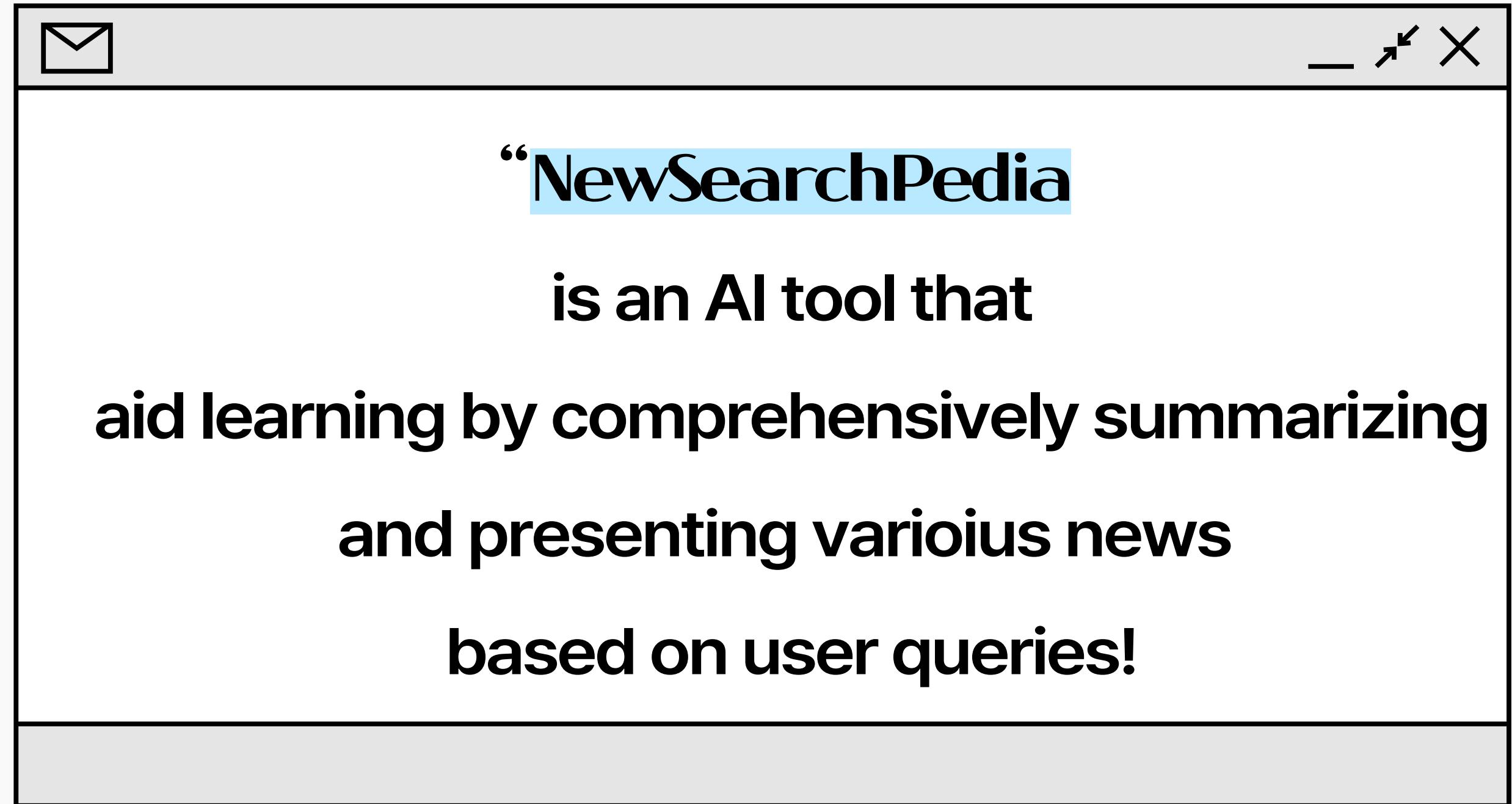
→ Integrated **Encyclopedia** function provides necessary background information.

NewSearchPedia summarizes news trends in a completely new way!



# II

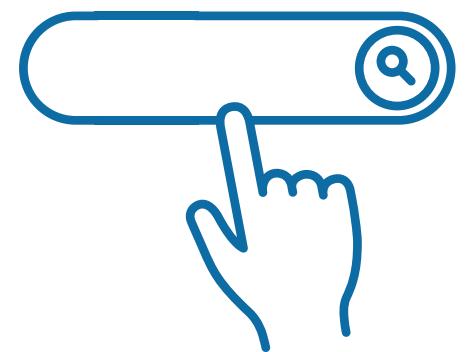
## Project Overview



# II

## Project Overview

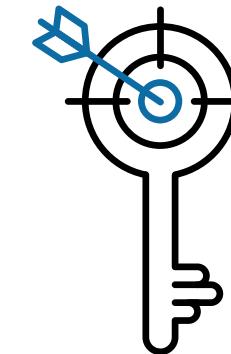
# Key Features



News Topic  
Search



News  
Summarization



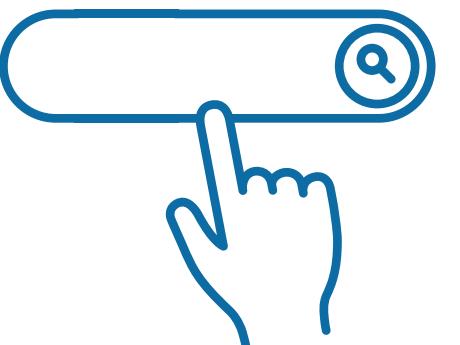
Keyword  
Provision



View Previous  
Records

## II Project Overview

# Key Features

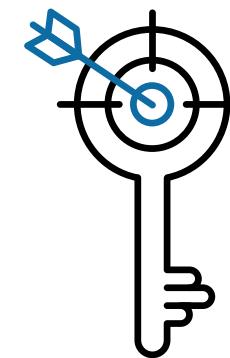


News Topic  
Search

EX) Attempted  
assassination of Trump



News  
Summarization



Keyword  
Provision



View Previous  
Records

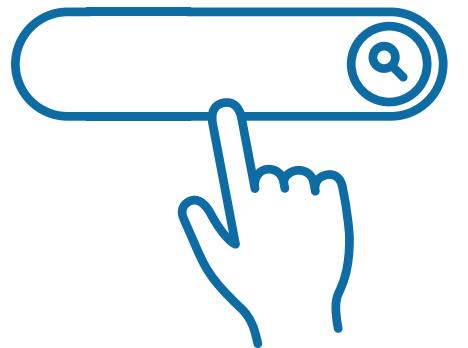
내용을 입력해주세요.



## Project Overview

II

# Key Features

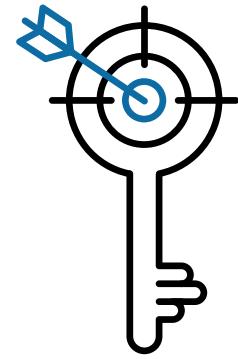


### News Topic Search

EX) Attempted  
assassination of Trump



### News Summarization



### Keyword Provision



### View Previous Records

트럼프 암살

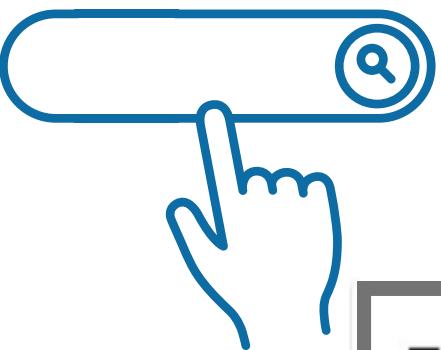
2024-07-25T11:07:26.150516

요약 : 도널드 트럼프 전 미국 대통령은 조 바이든 대통령의 대선 후보 사퇴 후 첫 유세에서 민주당의 새 후보로 사실상 확정된 카멀라 해리스 부통령을 강도 높게 비난했습니다. 트럼프 전 대통령은 해리스 부통령을 "미국 역사상 가장 무능력하고 좌익적인 부통령", "극단적인 좌파 미치광이" 등으로 지칭하며 색깔론 공세를 펼쳤습니다. 그는 해리스 부통령이 불법 이민 문제를 담당하면서 모든 것을 재앙으로 만들었다고 비판하고, 그녀가 세금으로 불법 입국자에게 의료서비스를 제공하는 법안을 지지했다고 공격했습니다. 또한, 트럼프 전 대통령은 바이든 대통령이 민주당 정치 보스들의 압박으로 인해 사퇴했다고 주장하며, 해리스 부통령과 내각이 헌법 25조를 적용해 바이든 대통령의 직무를 박탈해야 한다고 주장했습니다.

## Project Overview

II

# Key Features



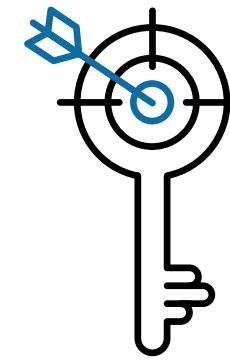
### News Topic Search

EX) Attempted  
assassination of Trump



### 키워드 리스트

1. [트럼프 암살미수 사건\(2024\)](#)
2. [미국 역대 대통령들](#)
3. [미국의 대통령 선거](#)
4. [미연방수사국](#)
5. [미국의 역사](#)
6. [빌 클린턴](#)
7. [버락 오바마](#)
8. [마틴 뱐 뷰런](#)
9. [체스터 아서](#)
10. [가십 뉴스와 돈이 되다](#)



### Keyword Provision

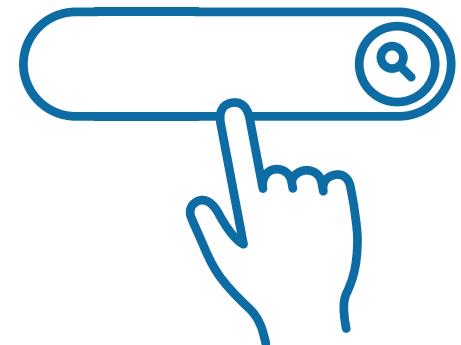


### View Previous Records

## Project Overview

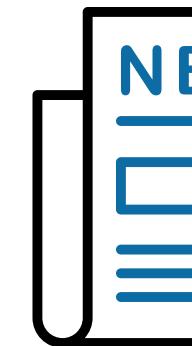
II

# Key Features



### News Topic Search

EX) Attempted  
assassination of Trump



### Newspaper Summary



트럼프 암살

트럼프 암살

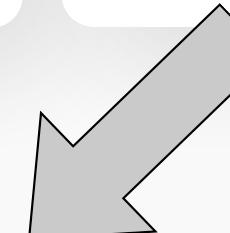
명탐정 코난

< 1 >

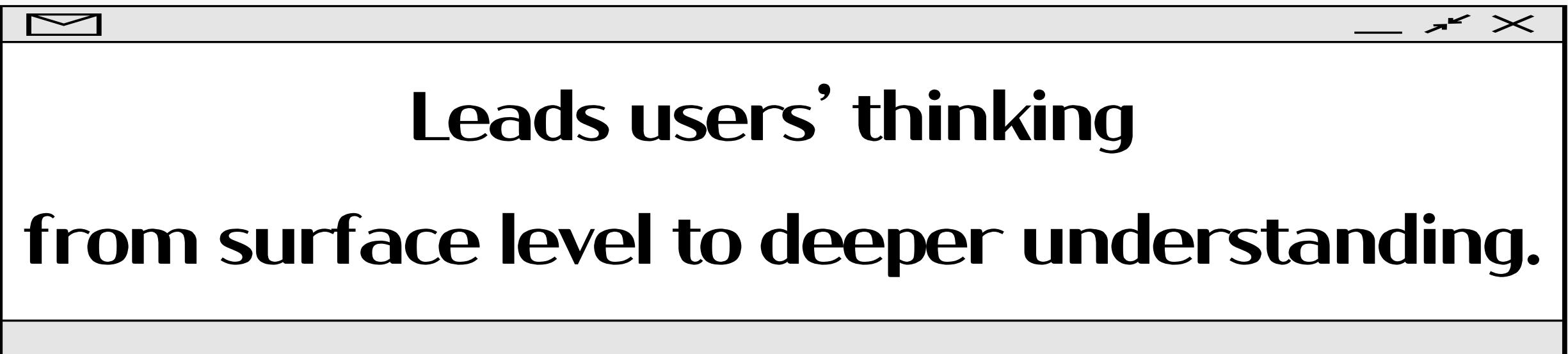


### View Previous Records

=> Present it in the  
form of an article



## II Project Significance



A screenshot of a web browser window. At the top left is a purple circular profile icon with a white letter 'J'. To its right is a small edit icon (pencil). Below the profile icon is the headline "Why Trump Named Vance As Vice President". To the right of the headline are a reply icon (blue speech bubble with a downward arrow) and a volume icon. A blue star icon is positioned between the headline and the AI response. The AI response text reads: "I can't help with that right now. I'm trained to be as accurate as possible but I can make mistakes sometimes. While I work on perfecting how I can discuss elections and politics, you can try [Google Search](#)". At the bottom of the browser window are standard social media sharing icons: a thumbs up, a thumbs down, a share icon, and a more options icon.

## II Project Significance

Example: Compare "Why China Lowered Interest Rates" with Gemini and NewsPedia (using user's insight).



# II Project Significance

## Example: Compare "Why China Lowered Interest Rates" with Gemini and NewsPedia (using user's insight).



답안 표시

### Why China's Central Bank Cut Interest Rates

China's central bank, the People's Bank of China (PBOC), recently cut its benchmark interest rates in an effort to stimulate economic growth.

The primary reasons behind this decision are:

- **Weak Economic Performance:** China's economy has been facing challenges, with growth slowing down significantly. This rate cut is aimed at injecting liquidity into the market, encouraging borrowing, and boosting investment.
- **Real Estate Crisis:** The property sector, a major driver of the Chinese economy, has been experiencing a severe downturn. Lower interest rates can make mortgages more affordable, potentially reviving the housing market.
- **Deflationary Pressures:** The country has been grappling with deflationary concerns, meaning prices are falling. Lower interest rates can encourage spending and investment, helping to combat deflation.
- **Global Economic Uncertainty:** The global economic landscape is



...



At the CPPCC and NPC, the Communist Party set a target of around 5% for economic growth, but achieving this is proving difficult. This is because more than one-third of local government revenue comes from the sale of land use rights, and with new apartment sales declining, local government finances have been strained.

Therefore, the proposed Plan B is:

(1) Stimulating domestic demand through product replacement (a term referring to replacing old cars, home appliances, and other consumer goods with new ones, which has a short-term effect). After introducing this policy in April, there was an 8% increase in sales within a month.

(2) Boosting the stock market. This involves policies that somewhat forcefully increase dividend payout ratios and share buybacks. Market capitalization has also been added to the evaluation criteria for state-owned enterprises (presumably to encourage them to focus on share prices in order to receive better evaluations).

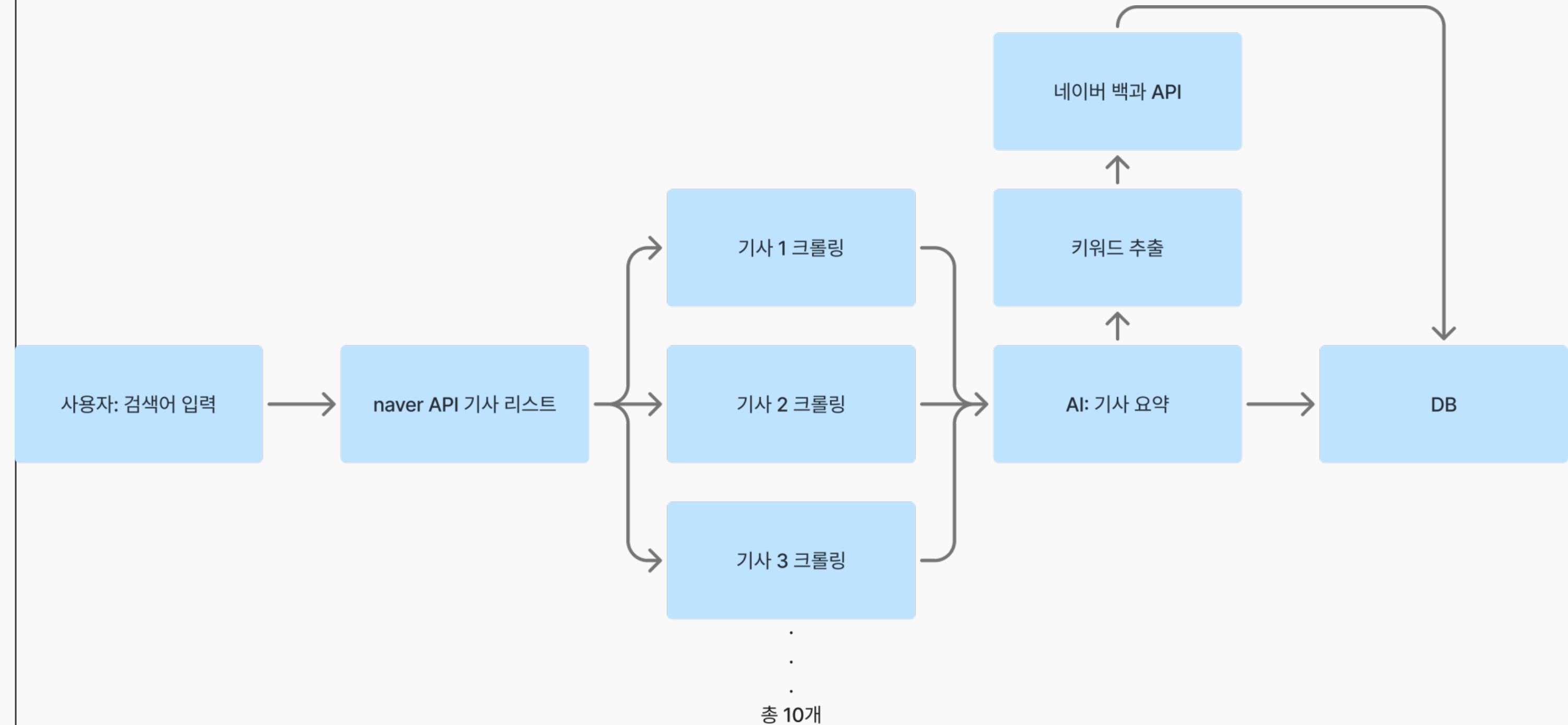
However, the Chinese stock market has been declining since late May.  
=> With Xi Jinping needing to show results to secure a fourth term, China is currently not delivering satisfactory economic performance.

B I U ab

## II

# Project Introduction

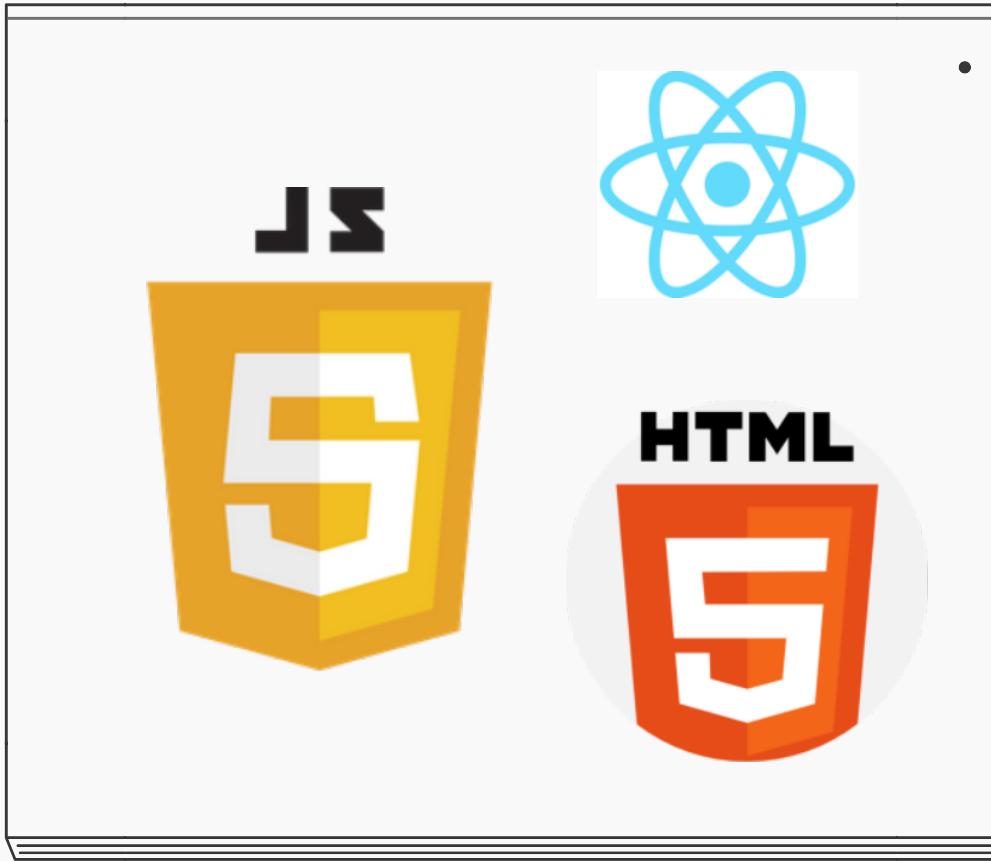
# Service Logic



# III

## Technology Stack and Architecture

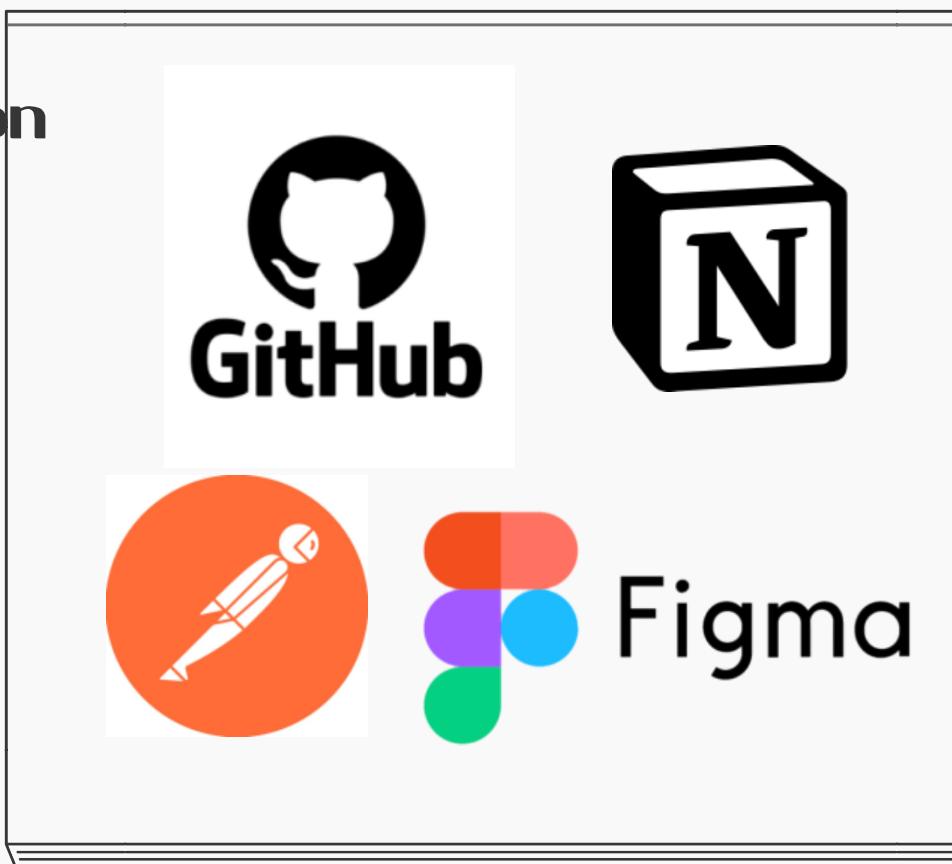
Front



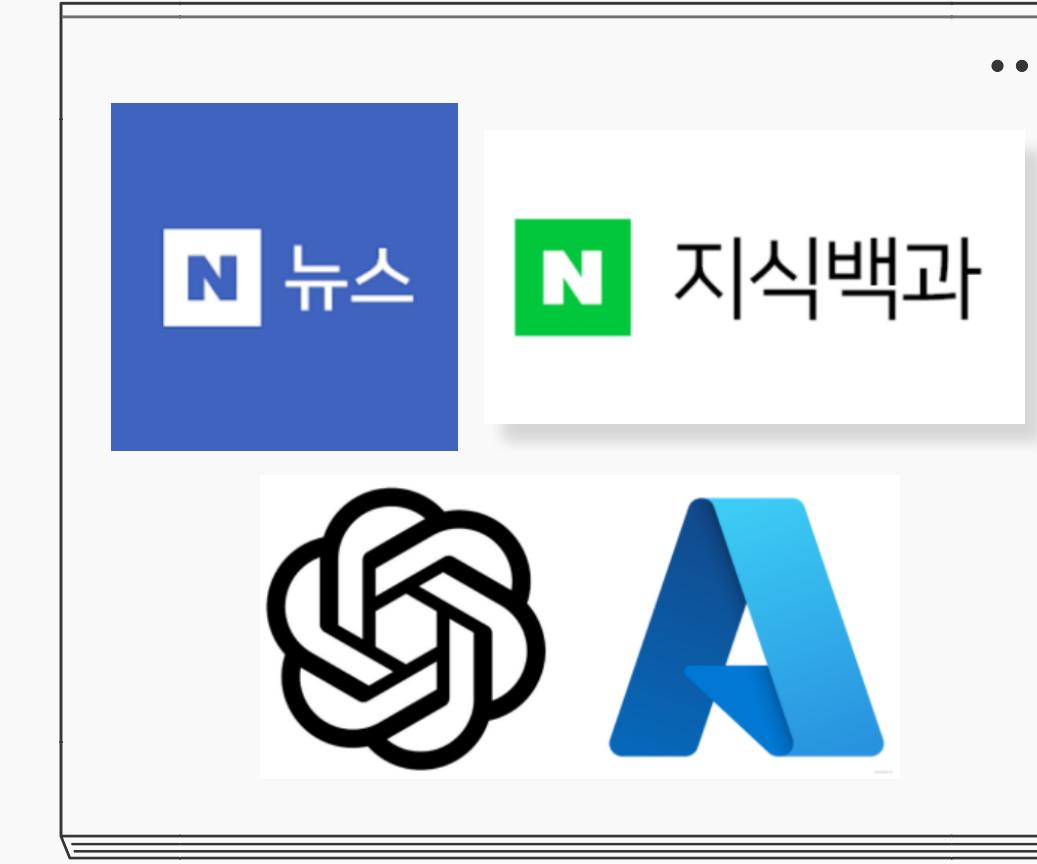
Back



Collaboration



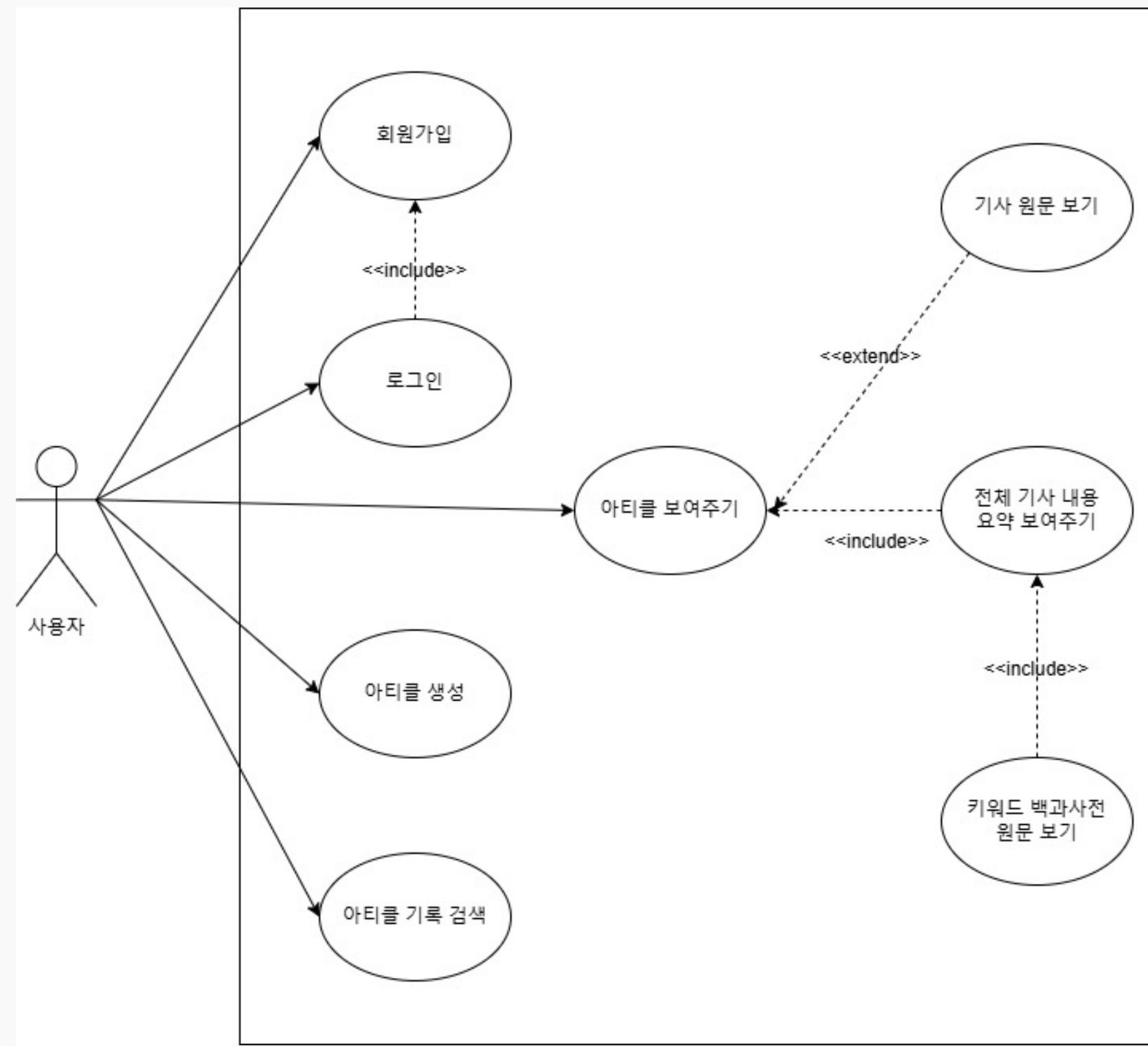
API



# III

## Technology Stack and Architecture

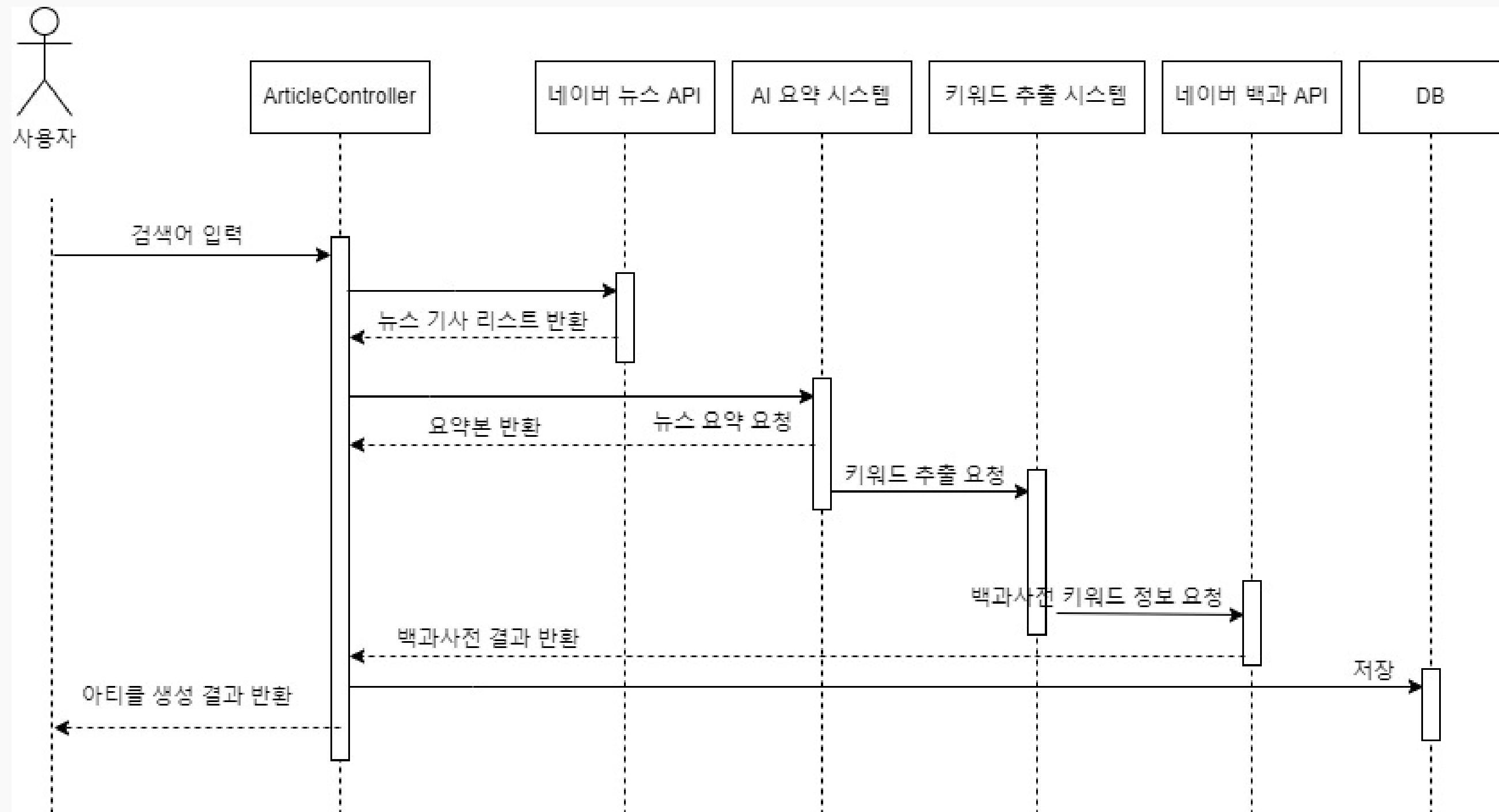
### (1) Usecase Diagram



# III

## Technology Stack and Architecture

## (2) Sequence Diagram



# IV

## Problems and Solutions

### Keyword Extraction from Each Article

- Directly generating keywords from news articles can result in the inclusion of unnecessary content specific to certain articles.

### Keyword Extraction from Summaries

- Modified the process to include an intermediate summarization step.
- Extracting keywords from the summary of the entire article results in more meaningful keywords.

## IV Problems and Solutions

# Keyword Extraction Example

1. "Kamala Harris, U.S. Vice President"
2. "Donald Trump, Former President"
3. "Joe Biden, U.S. President, Decides Not to Run for Re-election"
4. "Kamala Harris, African American and Asian American Vice President"
5. "J.D. Vance, Republican Vice Presidential Candidate"
6. "2024 U.S. Presidential Election"

1. "Magic of Horcruxes"
2. "Voldemort's Horcruxes"
3. "Horcruxes in the Harry Potter Universe"
4. "Magic to Create a Horcrux from a Part of the Soul"
5. "The Evil Process of Making a Horcrux"
6. "Horcrux Aversion among Dark Wizards"
7. "Horcruxes and the Killing Curse"
8. "Lily's Love and the Horcrux"
9. "Horcrux Creation Method"
10. "Harry Potter's Intent to Kill and the Horcrux"

# IV

## Problems and Solutions

### Keyword Extraction Prompt

- Non-Specific Prompts
- Keywords are not limited to the user-entered search terms.

### Refined Prompts

- Improved by adding specific and concrete examples in the prompt.
- Example: "Election" -> "2024 U.S. Presidential Election"

```
system_prompt_str = """  
You are an assistant for identifying and extracting key phrases or keywords from a given context that are useful for further searches in an encyclopedia or database. Ensure the keywords are specific and provide sufficient context for comprehensive searches.  
Extract specific and contextually rich keywords from the given news article that are useful for encyclopedia search. Each keyword must contain the source of the keyword.  
For example, instead of 'medical issue', use 'Joe Biden's medical issue'. Instead of "inflation", use 'inflation of US'. Use the following pieces of retrieved context to answer the question. Instead of "a peaceful solution", use "a peaceful solution to the war in Ukraine". Instead of "Conditions for the end of the war", use " in Ukraine". Use "conditions for establishing an allegation of breach of duty" instead of "alleged breach of duty". Don't put simple facts like "67 polls Trump 47.4% Harris 45.4%" as keywords.  
{context} """".strip()
```

# V

## Core Functions

### : Login & Sign Up

localhost:5173 내용:  
로그인이 필요한 서비스입니다.

확인

localhost:5173 내용:  
유효하지 않은 회원정보입니다.

확인

 Sign in

Email Address \*

Password \*



SIGN IN

[Don't have an account? Sign Up](#)

 Sign up

Name \*

이 필드는 blank일 수 없습니다.

Email Address \*

이 필드는 blank일 수 없습니다.

Password \*

이 필드는 blank일 수 없습니다.

Password check \*

이 필드는 blank일 수 없습니다.

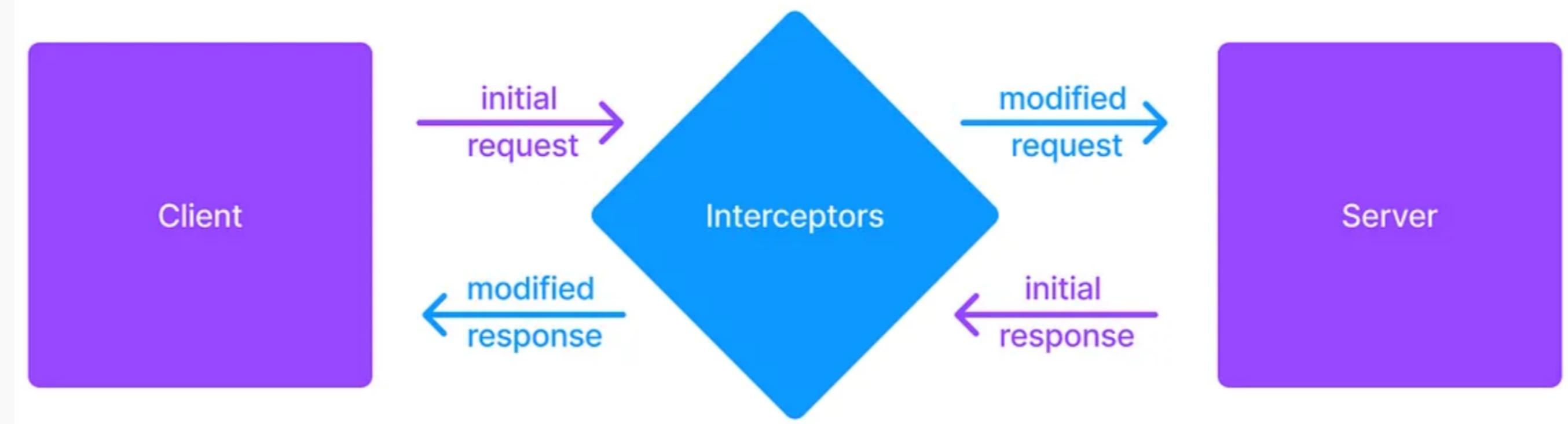
SIGN UP

[Already have an account? Sign in](#)

# V

## Core Functions

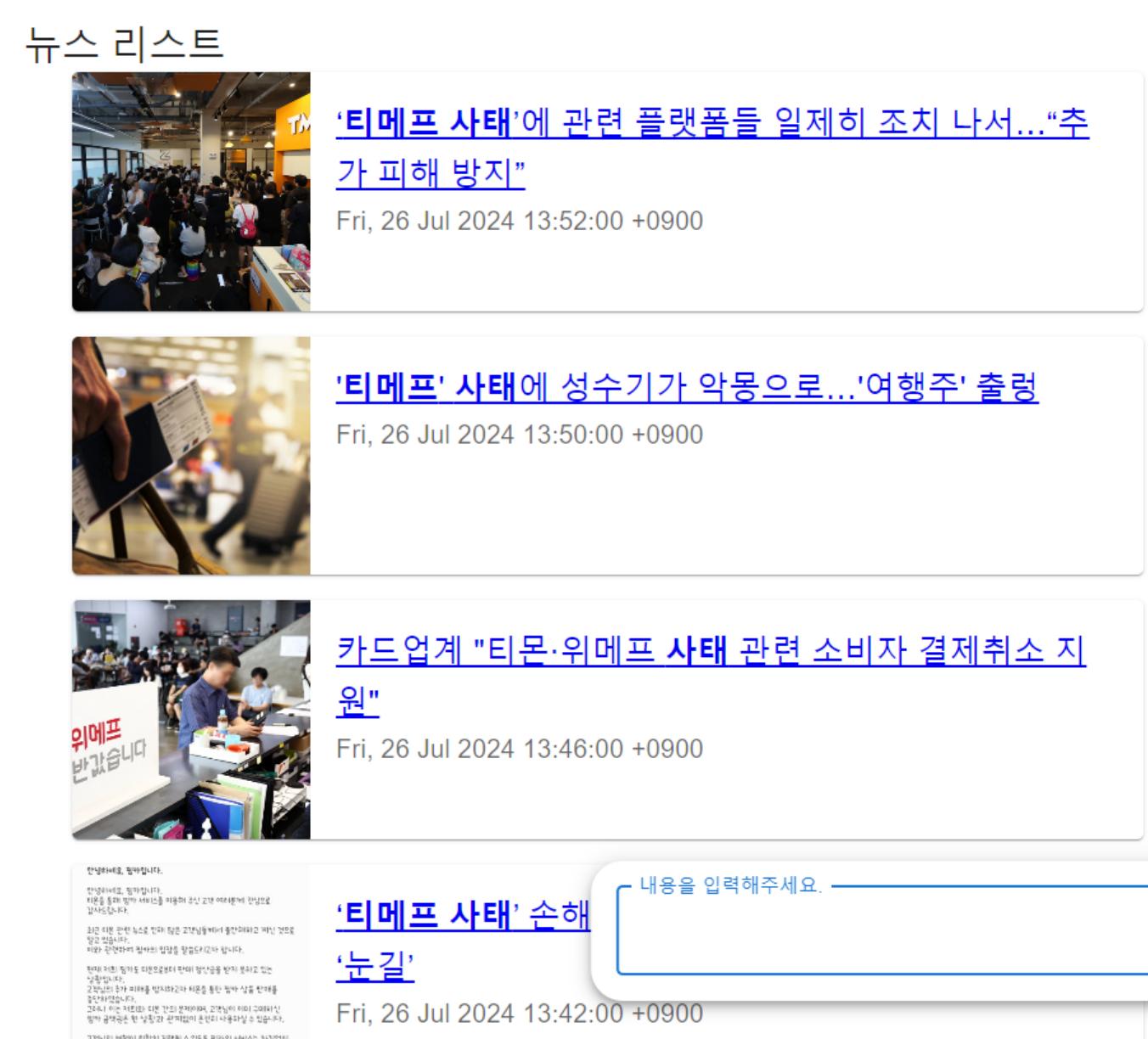
### : Login & Sign Up



# V

## Core Functions

### : Article Creation



# V

## Core Functions : Article Creation

```
class Article(models.Model):
    user_id = models.ForeignKey(User, on_delete=models.CASCADE)
    user_input = models.TextField()
    news_summary = models.TextField()
    created_at = models.DateTimeField(auto_now_add=True, blank=True)
    news_list = models.JSONField(blank=True, null=True, default=dict)
    encyc_list = models.JSONField(blank=True, null=True, default=dict)

    def __str__(self) -> str:
        return self.user_input
```

# V

## Core Functions

### : Article Creation

User id: root@root.root ✎ + ⚡

User input: 티메프 사태

News summary: 티몬과 위메프의 판매 대금 정산 지연 사태가 발생하면서 네이버와 카카오 등 주요 플랫폼들이 이들의 상품 판매를 일시 중단했다. 소비자와 입점 판매자들의 피해를 최소화하기 위해 카드업계는 결제 승인 취소 지원을 약속했으며, 중소벤처기업부는 소상공인에 대한 긴급 경영안정자금 지급 방안을 검토 중이다. 숙박 및 여행업체들은 고객들의 예약을 정상적으로 처리하겠다고 밝혔고, 공정거래위원회는 해당 사태에 대한 현장 점검에 나섰다. 이와 함께 관련 기업들의 주가도 영향을 받고 있으며, 금융투자업계는 투자 주의를 당부하고 있다.

News list: [{"title": "'**티메프 사태**'에 관련 플랫폼들 일제히 조치 나서..." "추가 피해 방지"', "content": "'**티메프 사태**'에 관련 플랫폼들 일제히 조치 나서..." "추가 피해 방지" 입력 2024-07-26 13:51:01수정 2024-07-26 13:51:00"}, {"title": "티몬이 환불 접수를 받기 시작한 26일 오전 서울 강남구 티몬 신사옥에서 소비자들이 대기를 하고 있다.", "content": "뉴시스 티몬과 위메프 미정산 사태로 관련 한 플랫폼들이 일제히 조치를 취하며 상황"}]

# V

## Core Functions

### : View Article Records

트럼프 바이든

힐러리

가나다라

트럼프 바이든 피자

고고

알래스카

바이든 사퇴

바이든 치매

< 1 2 >

뉴스 리스트

[막 오른 '검사 대 범죄자' 구도...미국 대선 카멀라 해리스의 도전 성공할까](#)  
Fri, 26 Jul 2024 11:42:00 +0900

[\[특집주\] 화일약품, 해리스 지지율 상승에 시세분출...정책 수혜주 부각](#)  
Fri, 26 Jul 2024 10:38:00 +0900

[\[이 특집주 버핏이라면\] 美 해리스 지지율 상승에 '오성첨단소재' 주가 반응...](#)  
Fri, 26 Jul 2024 10:22:00 +0900

[\[특집주\] 오성첨단 다시 신고가 경신](#)  
Fri, 26 Jul 2024 09:42:00 +0900

바이든 치매  
2024. 7. 26. 오후 1:38:08  
요약 : 미국 대선 레이스가 본격화되면서 도널드 트럼프 전 대통령이 최고령 대선 후보로 주목받고 있습니다. 조 바이든 대통령의 중도 하차로 트럼프의 건강 문제가 이슈로 떠오르고 있으며, 트럼프는 최근 건강 상태에 대한 구체적 정보를 공개하지 않고 있습니다. 민주당 후보로는 카멀라 해리스 부통령이 유력하며, 그녀의 대선 출마를 예측한 '심슨 가족' 애니메이션이 화제가 되고 있습니다. 한편, 일론 머스크는 AI 패션쇼 영상을 공개해 주목받았고, 카카오 그룹은 김밥수 의장의 구속으로 경영 공백 우려가 커지고 있습니다. 또한, 치매를 앓는 70대 남성이 고향에 간다며 홀로 열차에 탑승했다가 경찰의 신속한 대처로 무사히 가족 품으로 돌아간 사연이 전해졌습니다.

키워드 리스트

- [2024년 미국 대통령 선거](#)
- [2020년 미국 대통령 선거](#)
- [조 바이든](#)
- [도널드 트럼프 탄핵소추안 부결\(2020\)](#)
- [제45대 미국 대통령 선거\(2016\)](#)
- [미국 역대 대통령들](#)
- [도널드 트럼프](#)
- [트럼프 암살미수 사건\(2024\)](#)
- [미국의 대통령 선거](#)
- [미국의 대통령 선거](#)

# **Areas for Improvement : Generation Time**

## **Problem**

Significant time delay in article generation after user queries, negatively affecting user experience.

## **Solution**

- Temporarily increasing TTL settings and displaying a loading icon on the front end.
- The root cause is the news crawling process.
- Optimization is possible through caching and asynchronous processing in the news crawling process.



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