

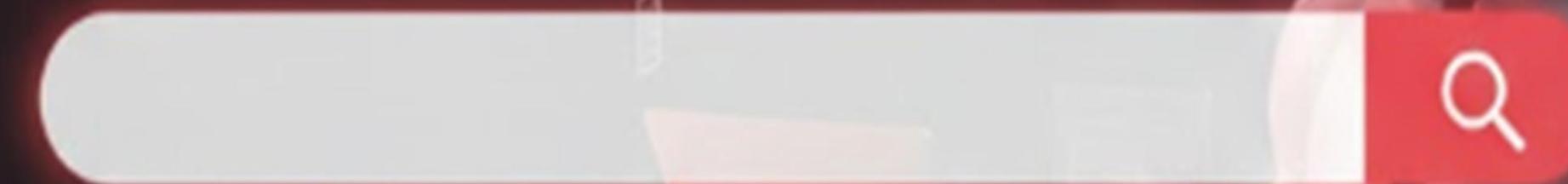
AI News & Research Tool

Instant AI-Powered News Intelligence
& Document Summarization

Deepa Pathak | Nexthikes IT Solution | January 2026

Github link: [DataWithDeepa \(Deepa Pathak\)](#)

News tool link : [AI News & Research Tool · Streamlit](https://ai-news-research-tool-7hsywts2qqcprnvugifrdi.streamlit.app/)



Agenda / Overview

Turning complex news and documents into **clear, actionable insights** in seconds.

01 Introduction & Project Goals



03 Solution: AI News & Research Tool



05 How It Works (System Flow)



07 Demo Highlights



09 Impact & Benefits



02 Problem Statement



04 Key Features



06 Technology Stack



08 Challenges & Solutions



10 Key Learnings



AI News & Research Tool is an intelligent web application designed to simplify news research and document analysis using AI.

REVOLUTIONIZING RESEARCH WITH REAL-TIME AI INSIGHTS

What's here?



The Challenge



Key Features



Live Demo



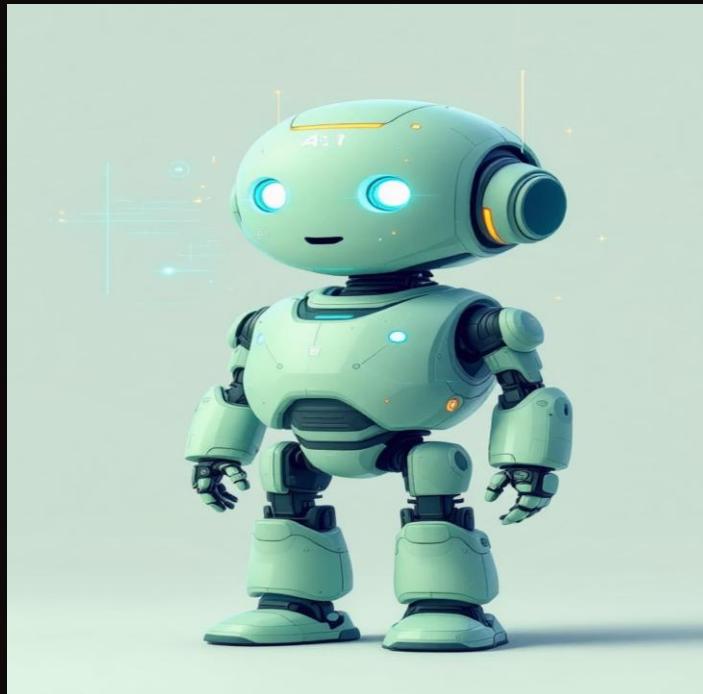
The Solution



Technology Stack



Impact & Future



Problem Statement

Identifying the key challenges in modern news consumption and document analysis.

Current Challenges

01 Information Overload:
Users are overwhelmed...



02 Time-Consuming Research:
Hours spent reading...



03 Difficult Document Analysis:
Analyzing static PDFs...



04 Scattered Data Sources:
News and policies are scattered...



Target Users

- Financial Analysts
- Students & Researchers
- Govt. Policy Trackers
- Business Professionals
- Market Trend Observers

— THE SOLUTION —

AI News & Research Tool

A smart Streamlit web application that unifies real-time global news tracking, intelligent document processing, and AI-powered summarization into a single platform.



Why this matters?

Delivers instant, professional-grade research reports, cutting down hours of manual work into seconds.



The Challenge: Drowning in Information



The Modern Research Dilemma

Today's analysts, students, and professionals face unprecedented challenges in staying informed and making data-driven decisions.

Information Overload

Thousands of articles published daily across scattered sources

Slow Manual Analysis

Hours spent reading lengthy documents

Complex Document Processing

Varied formats require tedious conversion and analysis

From Chaos to Clarity

The Solution That Changes Everything

A smart, multilingual AI tool that transforms hours of research into seconds of intelligent insight. Powered by cutting-edge language models and real-time data integration, this platform delivers professional-grade summaries exactly when you need them.



Lightning Fast

Get summaries in under 10 seconds

Always Current

Real-time news integration

Overwhelming Data

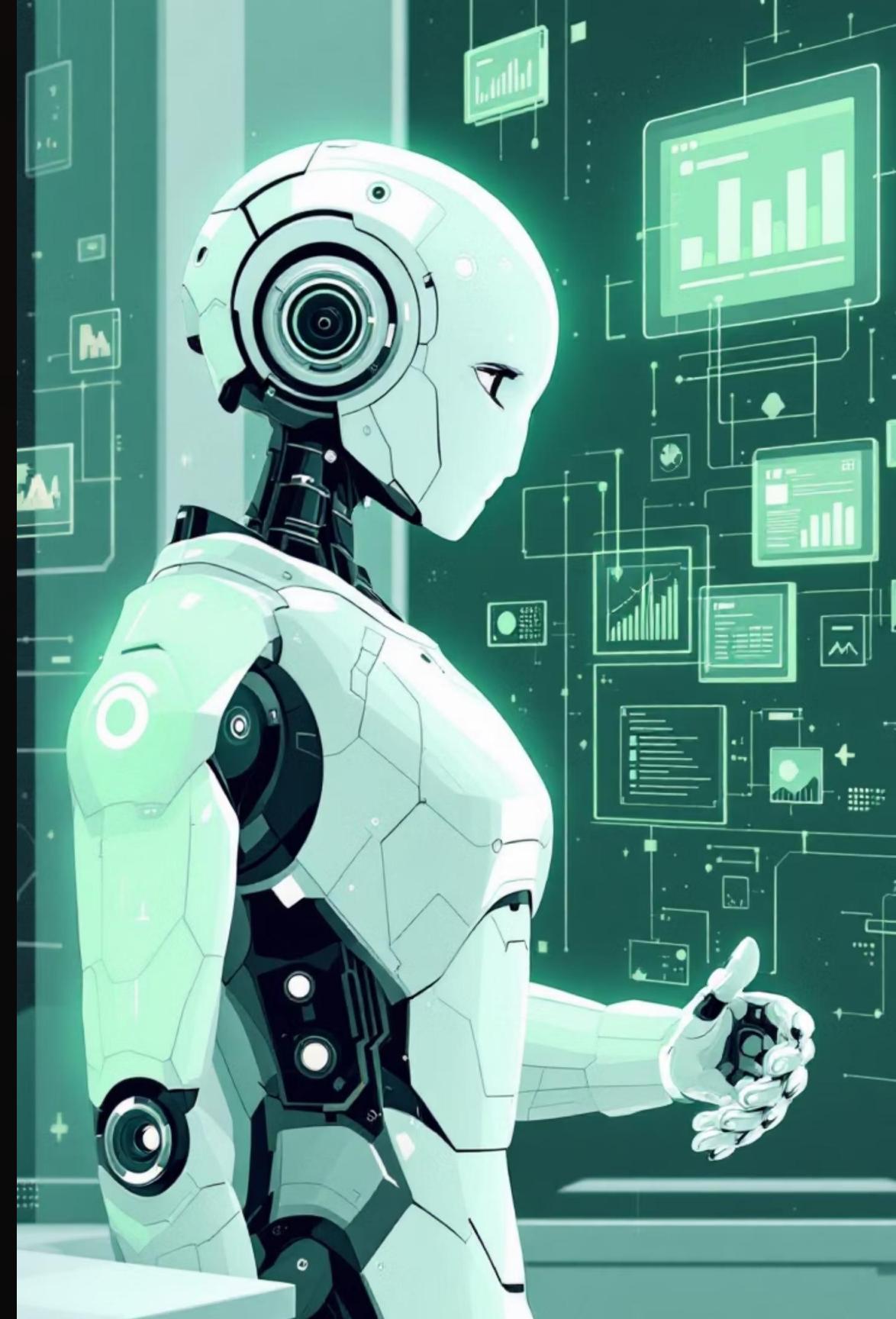
Rapid Processing

Concise Insights

Actionable Clarity

Multilingual Ready

English, Hindi, and Marathi support



Core Features: Intelligence at Fingertips



Secure Multilingual Access

with English/Hindi/Marathi

Secure Multilingual Access



Intelligent News Ticker

Real-time banking, govt schemes, interest rates



Universal Document Processing

Upload PDFs, DOCX files, or even images with EasyOCR

Enterprise-grade access in
multiple languages

AI Core
Intelligence
Central blue core powering
smart features

**Universal Document
Processing**

Automated extraction and normalization

Intelligent News Ticker

Real-time curated news highlights

How It Works: The Intelligence Pipeline

A seamless flow from query to insight, powered by state-of-the-art AI.



Secure Login

Choose language and authenticate



Query or Upload

Enter topic or upload document



NewsAPI Fetch

Real-time article retrieval



Document Processing

OCR and text extraction



Groq AI Analysis

Intelligent summarization



Rich Output

Professional results with sources

SYSTEM ARCHITECTURE – HOW IT WORKS



Complete Data Processing Pipeline

Deploy



AI News & Research Tool

Namaste! Welcome

Login ID

Enter your ID

Password

Enter your password



Language

English



Login Now

Deploy



AI News & Research Tool

Namaste! Welcome

Login ID

Enter your ID

Password

Enter your password



Language

English

English

Hindi

Marathi

Deploy



January 05,
2026

Search History

Save & Export

Recent World News

[Breaking Amish Star Jeremiah](#)

[Raber Life-Flighted to Hospital
- TMZ](#)

TMZ • 2026-01-04

[Greece: Thousands stranded
across Europe as air space
disrupted - BBC](#)

BBC News • 2026-01-04

[Rubio sets out US demands for
Venezuela's remaining leaders
- Financial Times](#)

Financial Times • 2026-01-04

LIVE NEWS: India's Trishul Drill Is A Symbolic Gesture of Regional Power | Russia's Failures in Financing

AI News & Research Tool

AI policy and regulation news

Attach File (PDF/DOCX/Image)

Drag and drop files here

Limit 200MB per file • PDF, DOCX, PNG, JPG, JPEG

Browse files

Generate Summary & Research



AI Research Summary

January 05,
2026

Search History

- Rbi poicy
- File Analysis

Save & Export

- Download Summary
- Download Raw News

Recent World News

- [Breaking Amish Star Jeremiah Raber Life-Flighted to Hospital - TMZ](#)

TMZ • 2026-01-04

- [Greece: Thousands stranded across Europe as air space](#)

LIVE NEWS: Latin America Commercial Cardio Fitness Equipment Market Strategic Insights | India-EU ti

एआई न्यूज़ और रिसर्च टूल

RBI POLICY

Generate Summary & Research

Export Summary

Export Raw News

Drag and drop files here
Limit 200MB per file • PDF, DOCX, PNG, JPG, JPEG

Browse files

January 05,
2026

Search History

• Rbi poicy

• File Analysis

Save & Export

Download Summary

Download Raw News

Recent World News

[Breaking Amish Star Jeremiah](#)

[Raber Life-Flighted to Hospital - TMZ](#)

TMZ • 2026-01-04

[Greece: Thousands stranded across Europe as air space](#)

आरबीआई नीति: एक विस्तृत विश्लेषण

भारतीय रिजर्व बैंक (आरबीआई) ने हाल ही में अपनी मौद्रिक नीति की घोषणा की है, जिसमें रेपो रेट में **25 बेसिस पॉइंट** की कटौती की गई है। यह निर्णय आरबीआई की मौद्रिक नीति समिति की बैठक में लिया गया था, जिसका उद्देश्य मुद्रास्फीति को नियंत्रित करना और आर्थिक विकास को बढ़ावा देना है।

मुख्य बिंदु

- रेपो रेट में **25 बेसिस पॉइंट** की कटौती, जो अब **5.25%** पर आ गई है
- स्टैंडिंग डिपॉजिट फैसिलिटी (एसडीएफ) रेट **5.25%** पर आ गया है
- मार्जिनल स्टैंडिंग फैसिलिटी (एमएसएफ) रेट और बैंक रेट **5.75%** पर आ गए हैं
- आरबीआई ने वित्त वर्ष **2025-26** के लिए वास्तविक जीडीपी विकास दर **6.5%** पर अनुमानित की है
- मुद्रास्फीति की दर वित्त वर्ष **2025-26** में **3.7%** पर अनुमानित की गई है

विश्लेषण

Search History

• Rbi poicy

• File Analysis

Save & Export

 Download Summary

 Download Raw News

Recent World News

[Breaking Amish Star Jeremiah](#)

[Raber Life-Flighted to Hospital](#)

- [TMZ](#)

TMZ • 2026-01-04

[Greece: Thousands stranded across Europe as air space](#)

Related Latest Articles

अभी भी लोग दबाए बैठे हैं ₹5669Cr... 2000 के नोट पर RBI का अपडेट • [Aajtak.in](#)

RBI Update On 2000 Rupee Note: रिजर्व बैंक ने सर्कुलेशन के बाहर किए जा चुके 2000 रुपये के नोटों पर बड़ा अपडेट दिया है और बीते साल के आखिरी दिन यानी 31 दिसंबर 2025 तक इनकी वापसी का डेटा शेयर किया है.

 [Read Full Article](#)

Exclusive: आरबीआई की मोनेटरी कमेटी के एक ऐलान भर से क्यों नाचने लग जाता है पूरा बाजार • [Abplive.com](#)

हाल में आरबीआई ने रेपोरेट में 25 बेसिस प्वाइंट की कटौती की है, जिससे यह 5.25 प्रतिशत पर आ गया। इससे उधारी सस्ती होती है और उपभोक्ताओं की खरीद क्षमता बढ़ती है, जिससे निवेश और मांग को प्रोत्साहन मिलता है.

 [Read Full Article](#)

Hot stocks: 9% की गिरावट के बावजूद साफ बेस बनने तक इंडिगो से रहें दूर, बंपर कमाई के लिए अगले हफ्ते इन 2 स्टॉक पर लगाएं दांव • [Moneycontrol](#)

RBI Rate Cut: रेट कट से घरों की बढ़ेगी मांग, एक्सपर्ट बोले- घर खरीदारों के साथ डेवलपर्स को भी होगा फायदा • [Moneycontrol](#)

Technology Stack: Built on Excellence

A powerful combination of cutting-edge technologies



Streamlit

Dynamic, responsive UI framework enabling rapid development and seamless user interaction



Groq LLM

Ultra-fast AI inference engine delivering summaries at unprecedented speeds



NewsAPI

Real-time global news aggregation from thousands of trusted sources worldwide



EasyOCR

Advanced optical character recognition supporting multiple languages and image formats



LangChain

Intelligent LLM orchestration framework for sophisticated prompt engineering



Python Ecosystem

Robust libraries including pdfplumber, torch, and more for document processing

Product Walkthrough Demo Highlights

Visual tour of AI News & Research application interface

LIVE NEWS | 10:02 AM

Drag and drop AI news feeds or URLs here
Paste URL here

Drag and drop All news sites or URLs here
Import news from digital media websites

Drag and drop AI news feeds or URLs here
Import news from digital media websites



Secure Login & Language

Forgot your password?

Forgot your login?

SECURE LOGIN

Multi-Format Upload



Drag and drop PDF, DOCX or JPG here
Limit 200MB per file

Limit 200MB per file

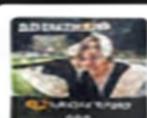
Browse Files

Recent News



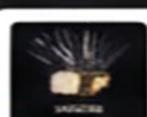
Recent News

President Biden's speech at the UN General Assembly was a major diplomatic success.



Democrats win Senate

Democrats won control of the US Senate in the 2022 midterm elections.



Elon Musk's Twitter

Elon Musk's Twitter account was hacked by a group of hackers.



Democrats win House

Democrats won control of the US House of Representatives in the 2022 midterm elections.

AI-Powered Insights

Groq AI Summary

Summarized

- Drag and drop PDF, DOCX, or JPG here
- Drop your files here to summarize them. Our AI will analyze the content and generate a summary for you.
- Test this feature with a news article or report.
- Read and test our AI.

VIEW FULL REPORT >

Voice Fails Report

Real-world
Usage

Project Development Challenges & Solutions

Overcoming technical hurdles to deliver a robust application

The Challenge



Groq Model Deprecation

The initial LLM model endpoint was deprecated during development, causing API failures.



Large File Limits

Uploaded PDFs exceeded the token context window of AI model, leading to errors.



News Reliability

Raw API data contained duplicate articles and irrelevant sources cluttering feed.

Our Solution



Latest Stable Model



Migrated to the newest stable Groq model version and implemented robust error handling.



Smart Chunking



Implemented LangChain's text splitter to chunk documents and summarize parts effectively.



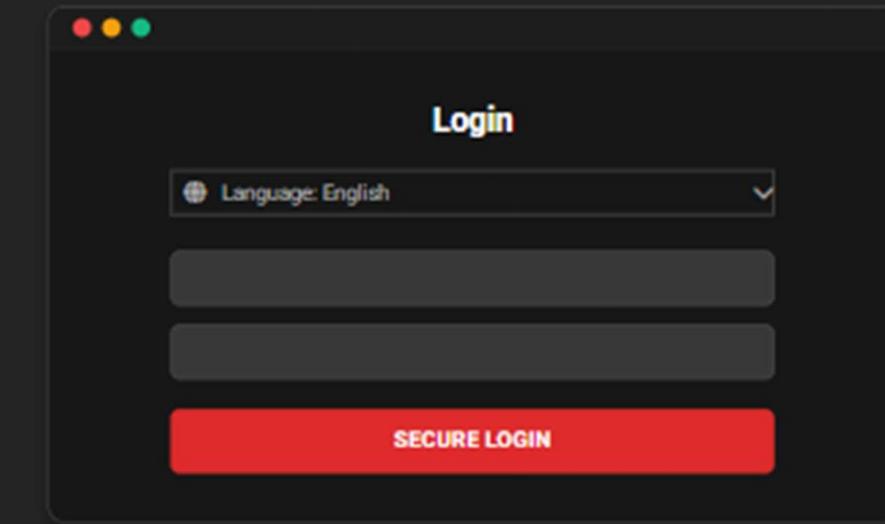
Source Filtering



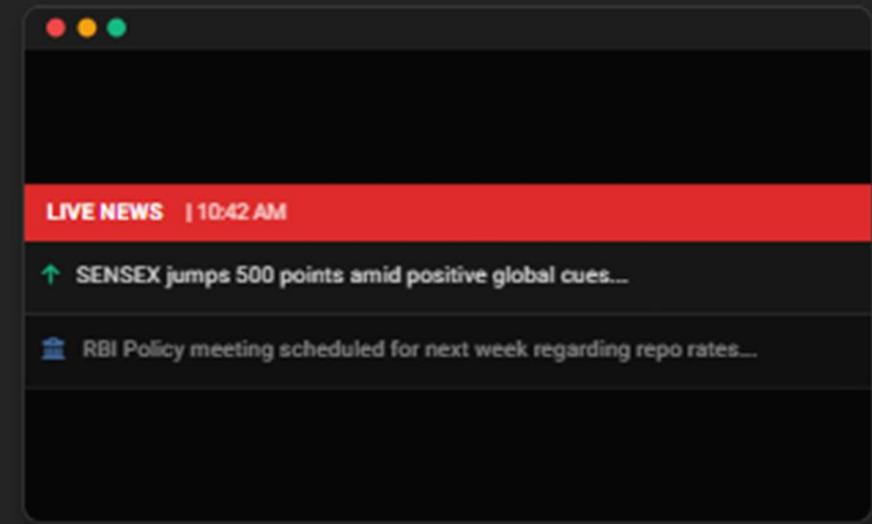
Added logic to deduplicate titles and whitelist trusted news domains for cleaner results.

Demo Highlights

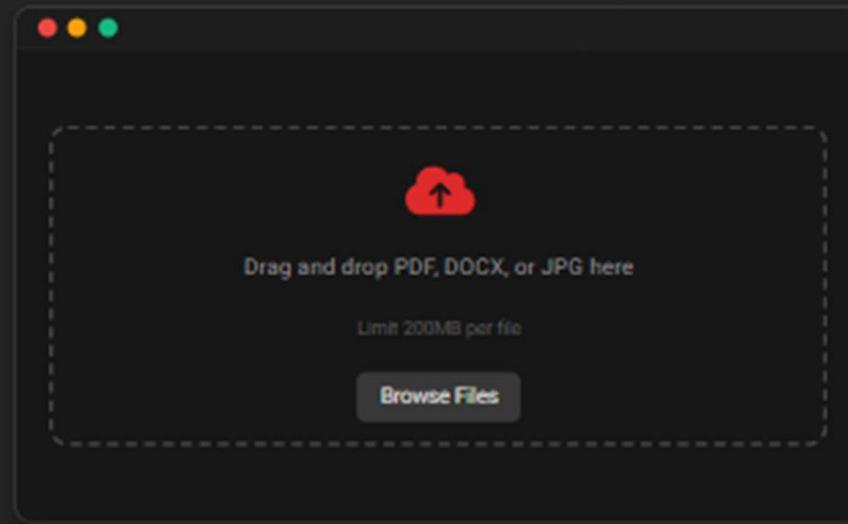
Visual tour of the AI News & Research application interface



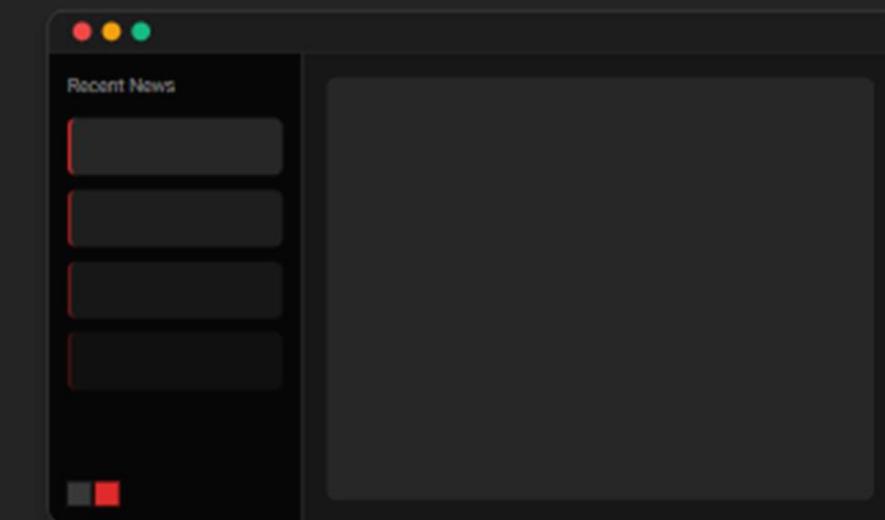
🔒 Secure Login & Language



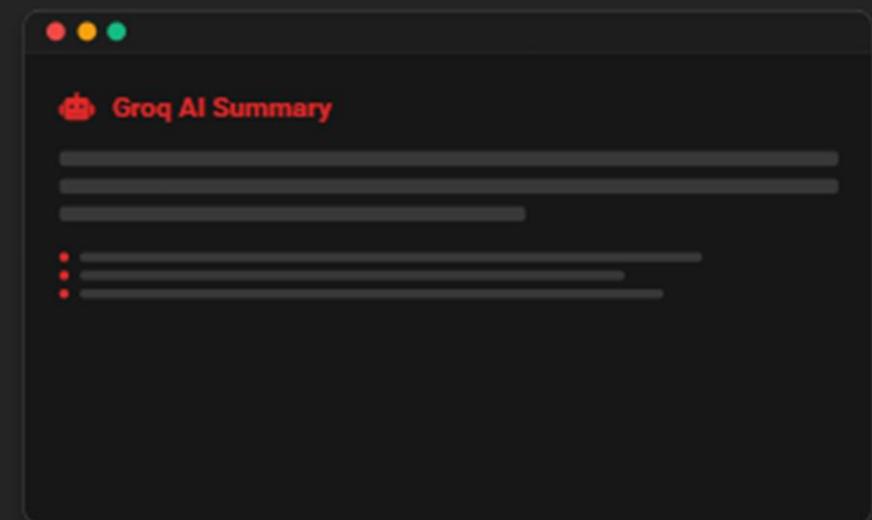
📣 Live Ticker & Alerts



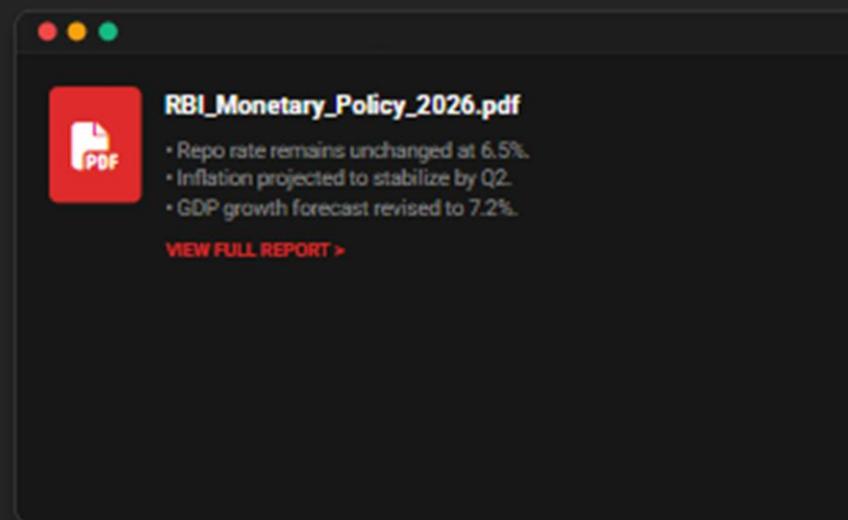
☁️ Multi-Format Upload



☰ Sidebar News Carousel



✍️ AI-Powered Insights



🖨️ Real-world Usage

Skills Gained During Development



API Integration & Real-Time Data

Mastered NewsAPI and live data stream integration for dynamic content delivery.



Advanced LLM Prompting

Developed expertise in LangChain orchestration techniques for sophisticated AI interactions.



OCR & Document Processing

Implemented EasyOCR and robust PDF handling for universal document analysis.



Responsive UI/UX Design

Achieved mastery in Streamlit framework for building dynamic and intuitive user interfaces.



Problem-Solving in Production

Successfully navigated model deprecation and optimized performance in a live environment.



Multilingual Application Development

Engineered support for three languages, enhancing accessibility for diverse user bases.

PROJECT OUTCOMES IMPACT & BENEFITS

Delivering tangible value through automation & intelligence

METRICS

90%

**Reduction in
Research Time**

Saves hours of manual documentation analysis

3X

Broader Accessibility

English

Hindi

Marathi

BENEFITS



Indian Domain Focus

Specialized tracking of local financial ecosystems, government schemes, and Indian market trends usually missed by global tools



Pro-Grade Output

Generates clean, structured summaries and reports suitable for immediate professional use, eliminating the need for manual reformatting



Faster Decisions

Transforms scattered information into clear, actionable insights instantly, enabling quicker strategic decision-making for analysts

Internship Outcomes

What I Learned

Key technical skills and insights acquired during Project 9

Achievement Metric

100%

Project Completion

Nexthikes IT Solution

Focus: AI & Full Stack Python

January 2026

Skills & Learnings



API Integration Mastery:

Integrated real-time data from NewsAPI and high-speed inference from Groq Cloud.



LLM & Prompt Engineering:

Designed efficient LangChain workflows to generate concise summaries from complex text.



Document UI/X Patterns:

Implemented OCR pipelines, dark-mode interface with interactive sliders and state management.

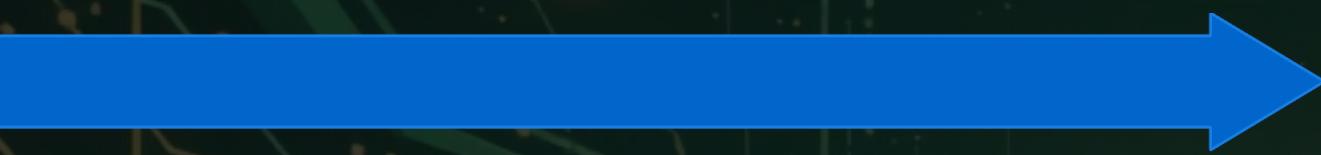


Real-world Problem Solving:

Handled token limits via text chunking and caching and adapted to API deprecations dynamically.

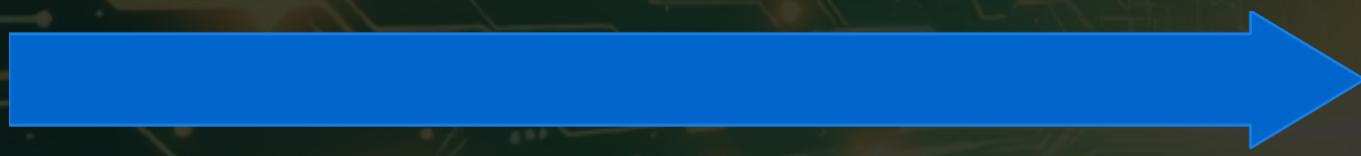
Future Roadmap: What's Next

Exciting features and expansions on the horizon



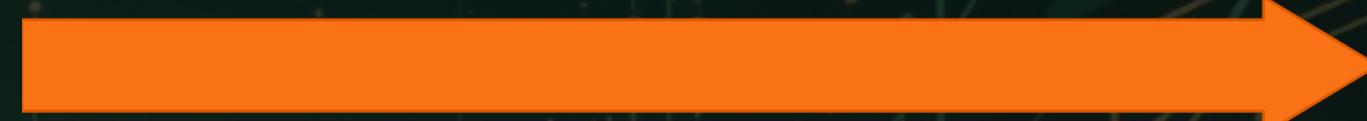
Voice Search Integration

Hindi and Marathi voice queries for hands-free research



Automated Reporting

Scheduled email summaries of key developments



Real-Time Market Data

Integrated stock charts and financial indicators



Mobile Application

iOS and Android versions for research on the go

THANK YOU

