InsightStream: Navigate the News Landscape:

NK LIVE NEWS APP

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NK LIVE NEWS: Navigate the News

Landscape **(React Application)**

Introduction:

**NK News** is a revolutionary web application designed to redefine how people discover and consume news. With its intuitive interface, dynamic search functionality, and a wide range of news categories, NK News caters to all types of users—whether you're a casual reader or a news enthusiast. Join NK News today to embark on an informative journey and experience the future of news consumption.

Description:

🌐 Welcome to **NK News**, your gateway to the world of news! Our cutting-edge web application is meticulously crafted to transcend the boundaries of traditional news consumption, catering to the diverse interests of both avid news enthusiasts and seasoned information professionals. With an emphasis on an intuitive user interface and a robust feature set, NK News is poised to redefine how you discover and consume news.

📰 **Designed for You:**  
NK News is built with a commitment to user-friendly aesthetics, immersing you in an unparalleled journalistic adventure. Navigate seamlessly through a vast expanse of news categories, from **Sports** and **Politics** to **Entertainment** and **Health**. With features like **dynamic search**, NK News effortlessly brings you the latest and most relevant stories from around the world.

🌍 **For Everyone:**  
Whether you're seeking the latest headlines or diving deep into specific topics, NK News embraces a diverse audience. Our platform fosters a dynamic community united by a shared passion for staying informed. From casual readers to news connoisseurs, NK News is designed to meet the needs of all.

📡 **Why Choose NK News?**

* **Intuitive Interface**: Easily navigate through news articles with a clean and modern design.
* **Real-Time Updates**: Stay ahead with the latest news as it happens, curated from reliable sources.
* **Personalized Experience**: Tailor your news feed by exploring different categories and saving your favorite topics.
* **Sponsored Ads**: Discover relevant promotions and offers through seamlessly integrated advertisements.
* **Professional Footer**: Access quick links, contact information, and subscribe to stay updated with the latest news.

🌐 **Join the NK News Community:**  
Embark on this informative journey with us, where innovation seamlessly intertwines with journalistic tradition. Every click within NK News propels you closer to a realm of global happenings and perspectives. Join us and experience the evolution of news consumption, where each feature is meticulously crafted to offer a glimpse into the future of staying informed.

**Why NK News Stands Out:**

* **Innovation Meets Tradition**: We combine cutting-edge technology with the timeless value of quality journalism.
* **Community-Driven**: Share, discuss, and collaborate with a vibrant community of news lovers.
* **Future-Ready**: NK News is designed to adapt to the ever-changing landscape of news consumption.

**Call to Action:**

Ready to elevate your news experience? Join **NK News** today and discover a smarter way to stay informed. Whether you're at home, at work, or on the go, NK News is your trusted companion for all things news.

**Example of How It Fits NK News:**

* **Dynamic Search**: Users can type keywords like "Cricket" or "Elections" to find relevant news.
* **Categories**: Buttons like "Sports", "Politics", and "Entertainment" allow users to filter news easily.
* **Sponsored Ads**: Ads are displayed at the top and bottom of the page, enhancing user engagement.
* **Footer**: Includes quick links, contact info, and a subscription form for updates.

# Scenario Based Intro:

Picture this: You're rushing home after a long day at work, phone clutched in your hand. The day has been a whirlwind, and you realize you’re completely out of the loop—what’s happening in the world? Suddenly, you remember **NK News**, the innovative app you downloaded that promised to revolutionize your news experience. Curious, you open the app.

Images flash across the screen—breaking headlines, in-depth articles, and a wide range of categories like **Sports**, **Politics**, **Entertainment**, and **Health**. This isn’t your typical news feed. NK News feels...different. Intrigued, you tap on a category and dive in. Within seconds, you’re immersed in the latest stories, effortlessly catching up on what matters most. This is the future of staying informed, and it’s right at your fingertips.

# Technical Architecture:

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The user experience begins with the **NK News web application**, built using modern frameworks like **React** for a seamless, single-page experience. The intuitive and responsive UI ensures smooth navigation, allowing users to effortlessly explore news articles, categories, and features.

At the core of NK News is its **API client**, designed to handle communication with the backend. But here’s the twist: NK News leverages **RapidAPI**, a powerful platform that provides access to a wide range of external APIs. This integration allows NK News to enrich its content by pulling in external data feeds and functionalities, enhancing the user experience without the need to build everything from scratch.

# Project Goals and Objectives:

✔ **User-Friendly Experience:**

* Develop an interface that is **intuitive** and **easy to navigate**, ensuring users can effortlessly access, save, and share their preferred news articles.
* Features like **dynamic search** and **category filters** make it simple for users to find the news that matters most to them.

✔ **Comprehensive News Management:**

* Provide robust features for organizing and managing news content, including **advanced search options** and **personalized news feeds**.
* Users can explore a wide range of categories, such as **Sports**, **Politics**, **Entertainment**, and **Health**, ensuring a tailored news experience.

✔ **Technology Stack:**

* Employ cutting-edge web development technologies, such as **React.js**, to ensure an **efficient** and **enjoyable user interface**.
* Leverage **RapidAPI** to integrate external data sources, enriching the platform with real-time news updates and additional functionalities

# Features of InsightStream:

**NK News** is designed to provide a comprehensive and engaging news experience. Here are the key features that make NK News stand out:

**1. News from API Sources:**

* Access a vast library of global news spanning various categories and interests, ensuring **well-rounded coverage** of current affairs.
* Stay updated with real-time news from reliable sources, curated through **RapidAPI** integration.

**2. Visual News Exploration:**

* Discover breaking stories and explore different news categories through **curated image galleries**, enhancing the visual appeal of news discovery.
* Engaging visuals make it easier to browse and find stories that catch your eye.

**3. Intuitive Design:**

* Navigate the application seamlessly with a **clean, modern interface** designed for optimal user experience.
* Enjoy a clutter-free design that prioritizes clarity and ease of use.

**4. Advanced Search Feature:**

* Easily access news articles on specific topics through a **powerful search feature**.
* Get tailored news content based on your interests, saving you time and effort.

# PRE-REQUISITES:

**1. Node.js and npm:**

* **Node.js** is a powerful JavaScript runtime environment that allows you to run JavaScript code on your local machine. It provides a scalable and efficient platform for building network applications.
* **npm** (Node Package Manager) is used to install and manage dependencies for your project.
* **Installation**:
  + Download Node.js and npm from the official website: <https://nodejs.org/en/download/>.
  + Follow the installation instructions for your operating system: <https://nodejs.org/en/download/package-manager/>.

**2. React.js:**

✔ **React.js**:

React.js is a popular JavaScript library for building user interfaces. It enables developers to create interactive and reusable UI components, making it easier to build dynamic and responsive web applications.

Install React.js, a JavaScript library for building user interfaces.

* Create a new React app:

npx create-react-app my-react-app

Replace my-react-app with your preferred project name.

* Navigate to the project directory:

cd my-react-app

* Running the React App:

With the React app created, you can now start the development server and see your React application in action.

* Start the development server:

npm start

This command launches the development server, and you can access your React app at [http://localhost:3000](http://localhost:3000/) in your web browser.

**3. HTML, CSS, and JavaScript:**

* **HTML**: Basic knowledge of HTML is essential for creating the structure of your app.
* **CSS**: Familiarity with CSS is required for styling the app and ensuring a visually appealing user interface.
* **JavaScript**: A solid understanding of JavaScript is necessary for adding interactivity and dynamic features to the app.

**4. Version Control:**

* Use **Git** for version control, enabling collaboration and tracking changes throughout the development process.
* Platforms like **GitHub** or **Bitbucket** can host your repository.
* **Git Installation**:
  + Download and installation instructions can be found at: <https://git-scm.com/downloads>.

**5. Development Environment:**

* Choose a code editor or Integrated Development Environment (IDE) that suits your preferences, such as:
  + **Visual Studio Code**: Download from <https://code.visualstudio.com/download>.
  + **Sublime Text**: Download from <https://www.sublimetext.com/download>.
  + **WebStorm**: Download from <https://www.jetbrains.com/webstorm/download>.

**To Install and Run the NK News Application:**

Follow the steps below to set up the **NK News** project on your local machine:

**1. Get the Code:**

* Download the code from the Google Drive link provided below:
  + [NK News Code Download Link](https://drive.google.com/drive/folders/1tDoSwd-1I3HsPJ9_92MnZTUtteeda-hL?usp=sharing).

**2. Install Dependencies:**

* + Navigate into the cloned repository directory and install libraries:

cd news-app-react npm install

**3. Start the Development Server:**

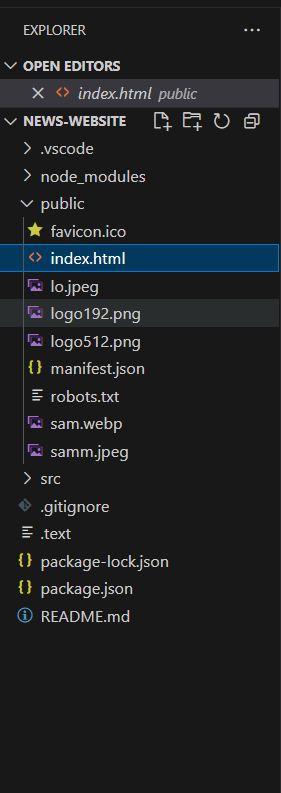
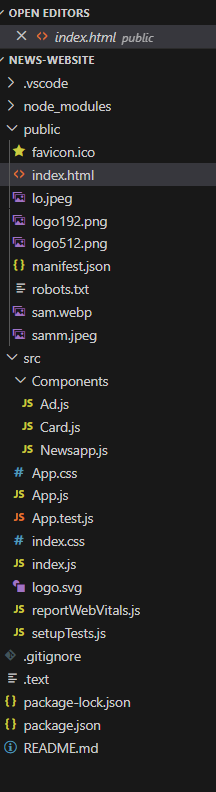
* To start the development server, execute the following command:

npm start

**4. Access the App:**

* Open your web browser and navigate to [http://localhost:3000](http://localhost:3000/).
* You should see the **NK News** homepage, indicating that the installation and setup were successful.

# Project structure:

**1. Components Folder:**

* This folder contains all the **small, reusable components** used throughout the application.
* Examples:
  + **Ad.js**: Renders sponsored advertisements displayed in the app.
  + **Card.js**: Displays individual news articles in a visually appealing card format.
  + **Newsapp.js**: The main component that integrates all features of the app, such as the search bar, news feed, and category filters.

**2. Context Folder:**

* This folder houses the **Context API** logic, which is used for efficient state management across the application.
* Examples:
  + **NewsContext.js**: Manages the state for news data, search queries, and user preferences, ensuring a seamless user experience.

**3. Pages Folder:**

* This folder stores the files that act as **pages** for different URLs in the application.
* Examples:
  + **HomePage.js**: The main page that displays the news feed, search bar, and category filters.
  + **AboutPage.js**: Provides information about NK News, its mission, and its team.
  + **ContactPage.js**: Allows users to get in touch with the NK News team for inquiries or feedback.

**4. Styles Folder:**

* This folder contains all the **CSS files** used for styling the application.
* Examples:
  + **App.css**: Global styles that apply to the entire application.
  + **Card.css**: Styles specific to the news card component.
  + **Navbar.css**: Styles for the navigation bar, ensuring a clean and intuitive user interface.

**Why This Structure Works:**

* **Modularity**: Separating components, pages, context, and styles makes the codebase easier to manage, debug, and scale.
* **Reusability**: Components like Ad.js and Card.js can be reused across different parts of the app, reducing redundancy.
* **State Management**: The Context API ensures efficient state management without the need for prop drilling, making the code cleaner and more maintainable.
* **Consistency**: Centralized styles in the Styles folder ensure a consistent look and feel across the app, enhancing the user experience.

**Project flow**

**Project demo**

Before starting to work on this project, let’s see the demo.

Demo link: <https://drive.google.com/file/d/1i8y09FiMk7QM0akH3my10OBWqXH-8dNh/view?usp=sharing>

Use the code in:

<https://drive.google.com/drive/folders/1tDoSwd-1I3HsPJ9_92MnZTUtteeda-hL?usp=sharing>

**Milestone 1: Project setup and configuration.**

## Installation of required tools:

To build InsightStream, we'll need a developer's toolkit. We'll use React.js for the interactive interface, React Router Dom for seamless navigation, and Axios to fetch news data. For visual design, we'll choose either Bootstrap or Tailwind CSS for pre-built styles and icons.

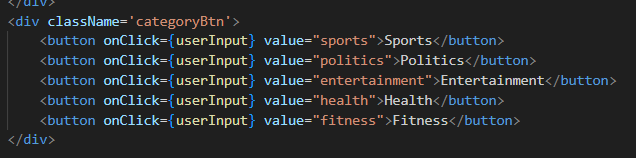
Open the project folder to install necessary tools. In this project, we use:

* + React Js
  + React Router Dom
  + React Icons
  + Bootstrap/tailwind css
  + Axios
* For further reference, use the following resources
  + <https://react.dev/learn/installation>
  + <https://react-bootstrap-v4.netlify.app/getting-started/introduction/>
  + <https://axios-http.com/docs/intro>
  + <https://reactrouter.com/en/main/start/tutorial>

**Milestone 2: Project Development**

* Setup the Routing paths

Setup the clear routing paths to access various files in the application

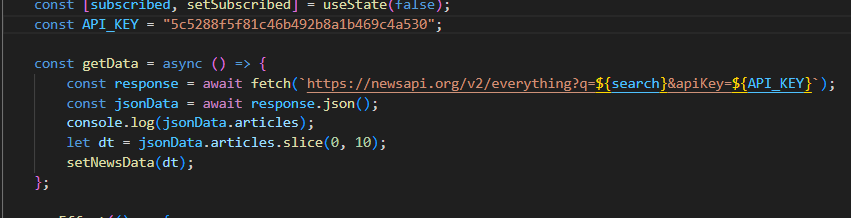


* Develop the Navbar and Hero components
* Code the popular categories components and fetch the categories from ***newsapi***.
* Also, add the trending news in the home page.
* Additionally, we can add the component to subscribe for the newsletter and the footer.
* Now, develop the category page to display various news articles under the different categories.

## Important Code snips:

**? Fetching Top/Trending news**

With the API request, we fetch the trending news articles.



**1. Asynchronous Function:**

* The function is marked as **async**, meaning it can handle asynchronous operations, such as making API requests that may take time to complete.
* This allows the program to continue running other tasks while waiting for the API response.

**2. try...catch Block:**

* The **try...catch** block is used to handle the API request and manage potential errors.
* **try Block**:
  + Contains the code that attempts to fetch data from the API using **axios.get**.
  + If the request is successful, the response data is returned.
* **catch Block**:
  + Catches and handles any errors that occur during the API request (e.g., network issues, invalid API key).
  + Prevents the program from crashing and allows for graceful error handling.
* *API URL:*
* The URL used in the API request is
* ‘https://newsapi.org/v2/everything?**q=tesla**&from=2025-02-01&sortBy=publishedAt&apiKey=5c5288f5f81c46b492b8a1b469c4a530’.

This is likely a specific API endpoint that returns popular news articles. You might need to replace this URL with the actual endpoint you want to use depending on the API you're using. Replace ' 5c5288f5f81c46b492b8a1b469c4a530’ with a placeholder instructing users to replace it with their own API key.

**Error Handling (catch block):**

* + The **catch block** is used to handle any errors that might occur during the API request.
  + If an error occurs (e.g., network issues, invalid API key, or server problems), it is logged to the console using **console.error(error)**.
  + This ensures that the application doesn’t crash and provides developers with useful debugging information.

**Setting State (then block not shown):**

* + The **.then method** (not shown in the code snippet) is typically used to process the fetched data after a successful API request.
  + In this case, it likely updates a **state variable** named **topNews** (based on the function name **fetchTopNews**) with the fetched news articles.
  + This state variable is then used to display the news articles in the user interface, ensuring that the latest data is shown to the user.

**Fetching News by Search/Category:**

* + To fetch news articles based on a specific **category** or **search keyword**, we make an API request with the relevant parameters.
  + For example:

If the user selects the **"Sports"** category, the API request will fetch all news articles related to sports.

If the user searches for a keyword like **"Elections"**, the API request will fetch articles containing that keyword.



The code snippet shows a function called get\_news\_articles that fetches news articles from a news API. Here's a breakdown of the code:

*Imports:*

The code starts by importing the requests library. The requests library is a popular Python library for making HTTP requests. If you don't already have it installed in your project, you can install it using pip install requests.

*API Key:*

The line API\_KEY = 'YOUR\_API\_KEY' defines a variable named API\_KEY and assigns it a placeholder value 'YOUR\_API\_KEY'. You should replace this with a placeholder instructing users to replace it with their own API key obtained from the news API provider they want to use.

*Function Definition (get\_news\_articles):*

The code defines a function named get\_news\_articles that takes two parameters:

* + query: This parameter is likely a string representing the search query for news articles.
  + source: This parameter is likely a string representing the news source (e.g., 'bbc-news', 'cnn').

*Building the API Request URL:*

The line url = f'https://newsapi.org/v2/everything?q={query}&apiKey={API\_KEY}' constructs the URL for the API request using a formatted string literal (f-string).

The URL includes the following parts:

* + - Base URL: <https://newsapi.org/v2/everything>
    - Query parameters:
    - q: This parameter is set to the query argument passed to the function.
    - apiKey: This parameter is set to the API\_KEY variable, which should contain the user's API key.

*Making the API Request (requests.get):*

The line response = requests.get(url) sends a GET request to the API URL constructed earlier. The requests.get function from the requests library is used to make the HTTP request. The response from the API is stored in the response variable.

*Error Handling (try...except block):*

* + The try...except block is used to handle potential errors during the API request.
  + The try block contains the code that attempts to fetch data from the API using requests.get(url).
  + The except block handles any exceptions that might occur during the request, such as network errors or invalid API responses. In this case, it prints an error message to the console using print(f'Error fetching news articles: {e}').

# Project Execution:

After completing the code, run the react application by using the command “npm start” or “npm run dev” if you are using vite.js

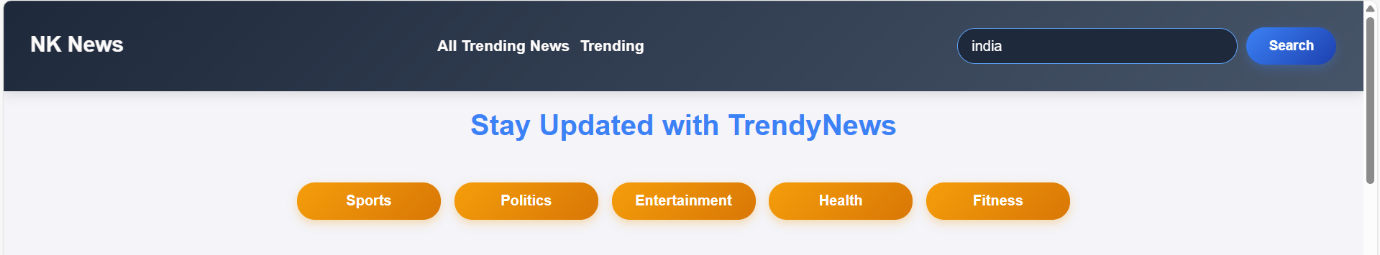
Here are some of the screenshots of the application.

## ? Hero components

The **Hero Component** is a key part of the **NK News** application, designed to grab the user’s attention and provide quick access to important features. Here’s what it includes:

**1. Trending News Articles:**

* The hero section prominently displays **trending news articles** to highlight the most important or popular stories of the day.
* These articles are fetched from the **NewsAPI** and displayed in a visually appealing format, often with:
  + Large images or banners.
  + Eye-catching headlines.
  + Short descriptions to give users a quick overview.

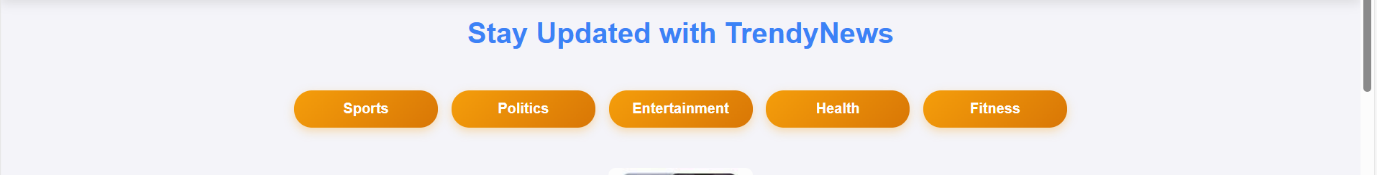


## **2. Popular categories**

In the **NK News** application, the **Popular Categories** section allows users to explore news articles based on their interests. This feature enhances the user experience by providing quick access to specific topics. Here’s how it works:

**1. Displaying Popular Categories:**

* The app displays a list of **popular categories**, such as:
  + **Sports**
  + **Politics**
  + **Entertainment**
  + **Health**
  + **Fitness**
* These categories are presented as buttons or tabs, making it easy for users to filter news articles by their preferred topics.

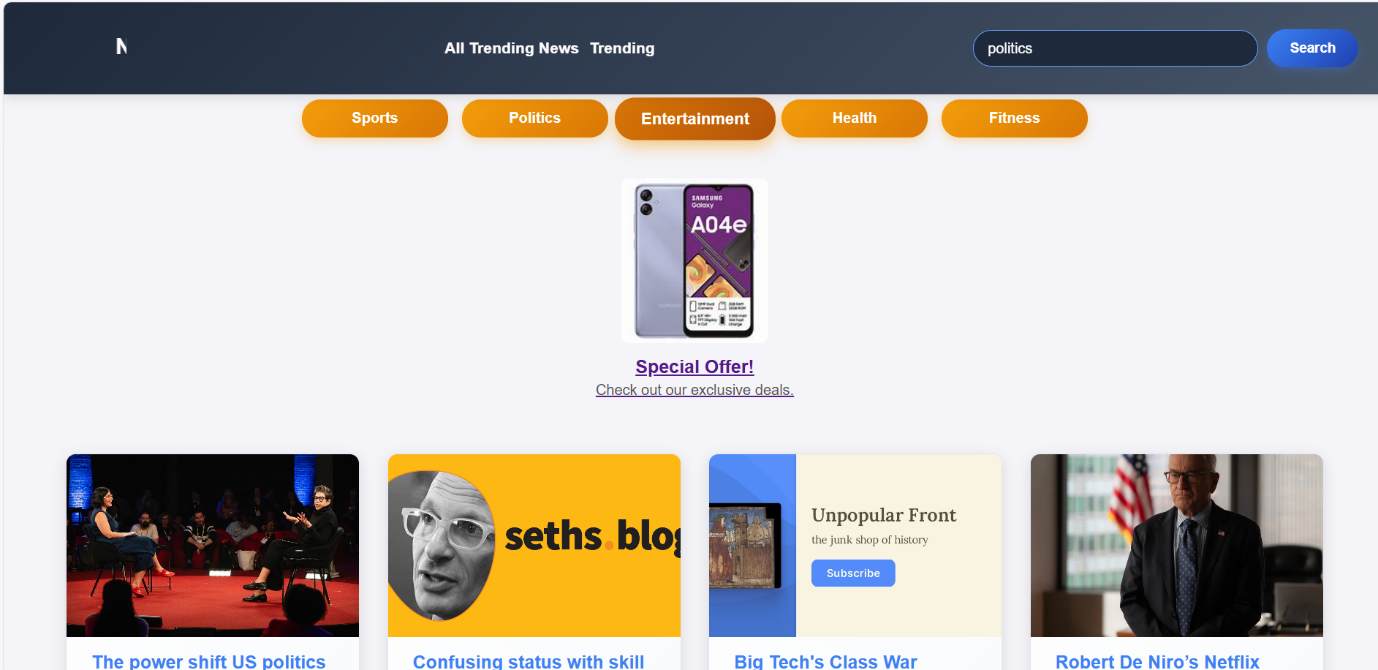


**Category/Search result page**

Finding the news you’re looking for is effortless with **NK News**. The **Category/Search Result Page** displays a neatly organized list of articles that match your chosen category or specific search query. Here’s how it works:

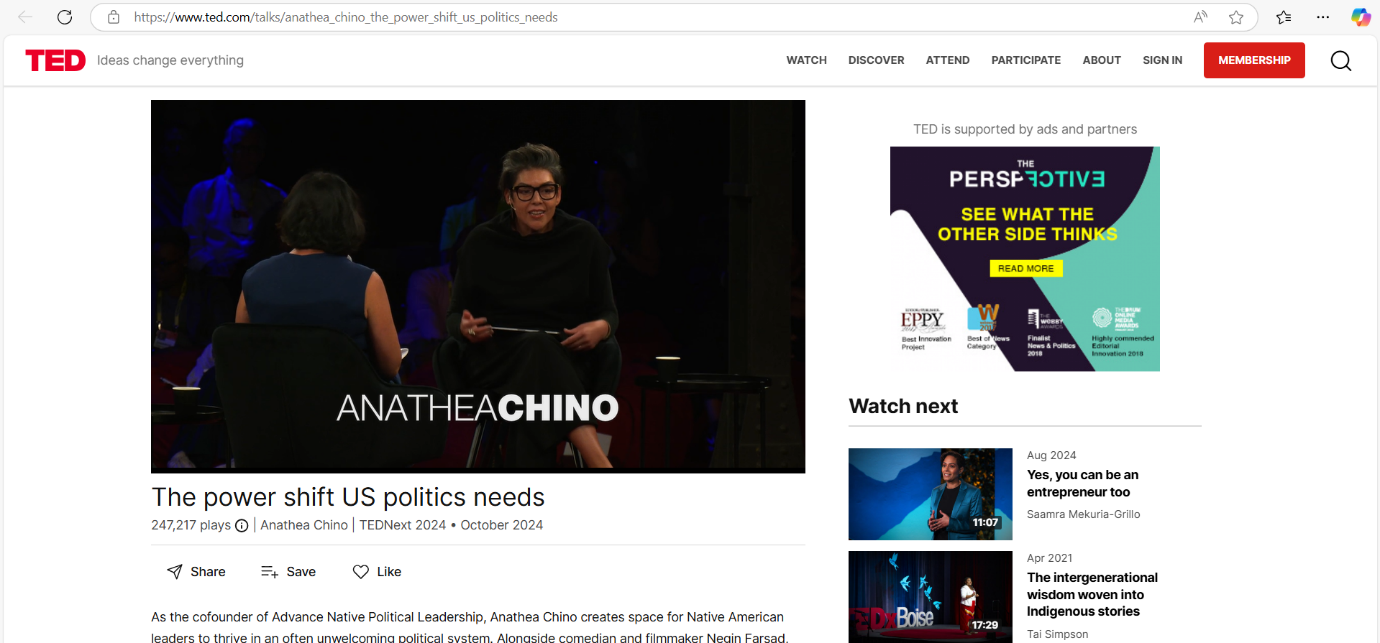
**1. Displaying News Articles:**

* When you select a category (e.g., "Sports") or enter a search query (e.g., "Elections"), the app fetches and displays relevant news articles.
* Each article is presented in a **card-based layout**, including:
  + **Headline**: A clear and concise title to grab your attention.
  + **Summary**: A brief description of the article to give you a quick overview.
  + **Image**: If available, an image is displayed to provide a visual glimpse into the story.



## Redirected Article page

This is where you dive deep! The article page proudly displays the complete news story, retrieved directly from the original source. To keep you engaged and exploring related topics, the page might also suggest additional articles based on the current story. These suggestions can open doors to a world of interconnected information, allowing you to become a well-rounded news connoisseur.



Project Demo link:

[https://drive.google.com/file/d/1i8y09FiMk7QM0akH3my10OBWqXH-8dNh/view?usp=shari](https://drive.google.com/file/d/1i8y09FiMk7QM0akH3my10OBWqXH-8dNh/view?usp=sharing) [ng](https://drive.google.com/file/d/1i8y09FiMk7QM0akH3my10OBWqXH-8dNh/view?usp=sharing)