# Project Documentation

## Project Title

**InsightStream – Navigate the News Landscape**

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# 1. Introduction

- **Project Title:** InsightStream

- **Team ID:** NM2025TMID47806

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# 2. Project Overview

## Purpose

The primary objective of InsightStream is to establish a user-friendly platform tailored for individuals who are passionate about staying informed, exploring diverse news topics, and accessing the latest updates.

## Key Goals

- **User-Friendly Experience:** Intuitive interface for effortless navigation, saving, and sharing of news articles.

- **Comprehensive News Management:** Advanced search and filtering to create a personalized news experience.

- **Modern Technology Stack:** Built using React.js, API integration, and cloud-ready deployment for speed and scalability.

## Features

- **News from API Sources:** Real-time news across categories such as Business, Technology, Sports, Entertainment.

- **Visual News Exploration:** Curated image galleries and interactive news discovery.

- **Intuitive Design:** Clean, responsive, and user-friendly interface.

- **Advanced Search:** Filter by keywords, categories, and explore trending news.

- **Newsletter Subscription & Footer:** Engage users with updates and provide site-wide navigation.

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# 3. Architecture

- **Frontend:** React.js with Tailwind CSS or Bootstrap for responsive design.

- **API Layer:** Axios + RapidAPI/NewsAPI integration for fetching real-time news data.

- **State Management:** React Context API for global state sharing.

- **Routing:** React Router DOM for SPA navigation.

- **Backend (Optional):** Node.js or serverless functions for newsletter subscription and saved articles.

- **Deployment:** Cloud hosting (Netlify, Vercel, or AWS).

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# 4. Setup Instructions

## Prerequisites

- Node.js & npm → [Download Here](#)

- Git → [Download Here](#)

- Basic knowledge of HTML, CSS, JavaScript, React.js

## Installation Steps

```
# Clone the repository
git clone <repository-url>
cd news

# Install dependencies
npm install

# Start development server
npm start
```

Access the application at **http://localhost:3000**

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# 5. Folder Structure

```
/src
├── /components     # Reusable UI elements (Navbar, Hero,
NewsCard)
├── /context        # Context API logic for global state
├── /pages          # Home, Category, ArticleDetails, Search
└── /styles         # CSS/Tailwind styling files
```

**Benefits:**
✅ Organized and scalable
✅ Clear separation of concerns
✅ Easy collaboration

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# 6. Running the Application

**Frontend:**

```
cd news
npm start
```

Visit **http://localhost:3000** in your browser.

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# 7. Project Development

## Routing Paths Setup

Use React Router DOM for navigation between pages.

## Navbar & Hero Components

- Navbar: Global navigation links to Home, Categories, Search.

- Hero: Displays top/trending news in a visually appealing way.

## Popular Categories & Trending News

- Dynamically fetch categories from API.

- Show trending news on homepage with images and short descriptions.

## Newsletter & Footer

- Simple subscription form to collect user emails.

- Footer with About, Contact, Privacy links.

## Category/Search Pages

- Fetch and display news articles based on category or search term using Axios.

## Redirected Page (Article Details)

- Show full article content with image, source link, and related news.

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# 8. Important Code Snippets

## Fetching Top/Trending News

```
axios.get(`https://newsapi.org/v2/top-headlines?country=us&apiKey=${pr
ocess.env.REACT_APP_NEWS_API_KEY}`)
  .then(response => setTopNews(response.data.articles))
  .catch(err => console.error(err));
```

## Fetching News by Search / Category

```
axios.get(`https://newsapi.org/v2/everything?q=${searchTerm}&apiKey=${
process.env.REACT_APP_NEWS_API_KEY}`)
  .then(response => setSearchResults(response.data.articles))
  .catch(err => console.error(err));
```

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# 9. Project Flow

**User Flow:**

- Home → Select Category / Search → View Articles → Click Article → Redirect to Details Page → Save/Share
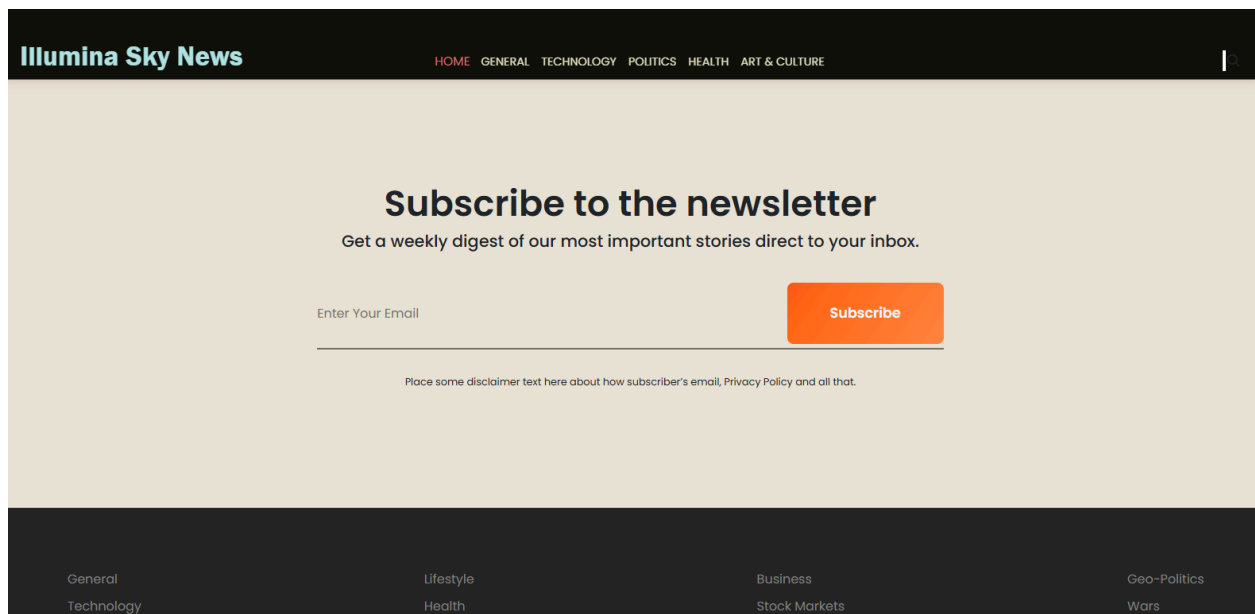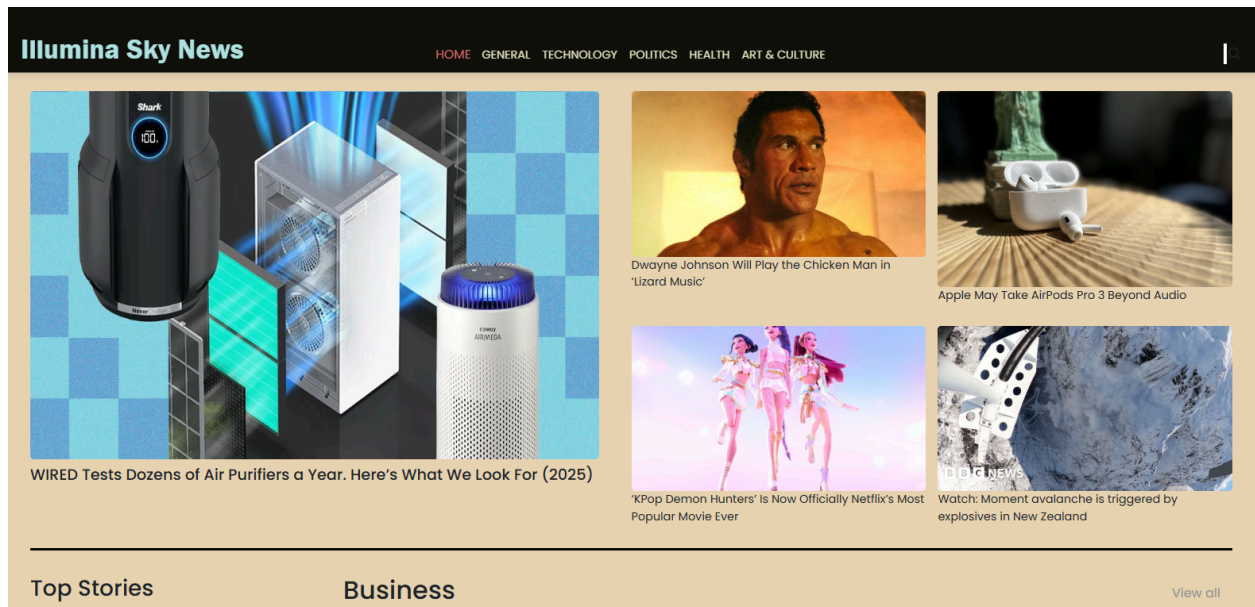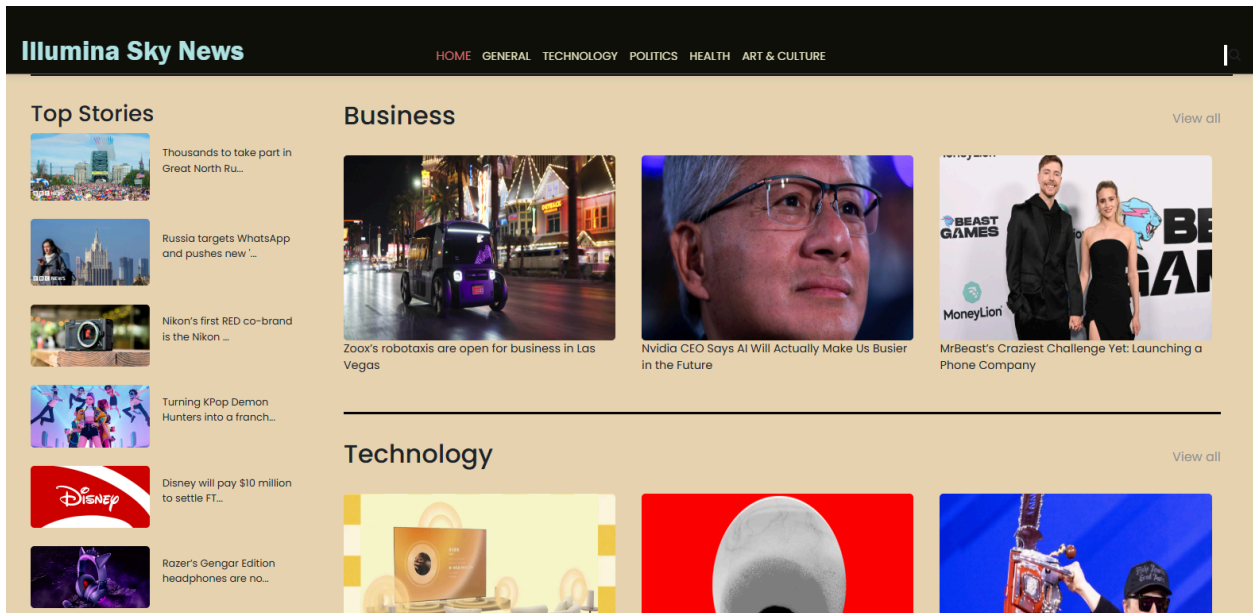
🎥 **Demo Video:**
 Watch Demo

📂 **Project Code:**
 Project Files

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**screenshot:**

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## 10. Testing

- Manual testing using browser developer tools.

- API testing using Postman.

- Responsiveness checked on mobile and desktop devices.

## 11. Future Enhancements

- AI-powered news summarization.

- User authentication for personalized feeds.

- Dark mode and multi-language support.

- Push notifications for breaking news.