Project Document (InsightStream)

1. Introduction

- Project Title: InsightStream Navigate the News Landscape
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2. Project Overview

• Purpose:

InsightStream is a web application designed to redefine how users discover and consume news. It delivers a personalized, intuitive, and visually engaging news experience by integrating APIs and dynamic search features.

• Features:

- Top/Trending News highlights
- Explore news by category
- Advanced search for tailored articles
- Newsletter subscription
- Clean, modern, and responsive interface

3. Architecture

- Frontend: React.js with Tailwind CSS/Bootstrap
- API Integration: Axios + RapidAPI for external news feeds
- Routing: React Router DOM for navigation
- State Management: React Context API for global state
- Backend (Optional Extension): Node.js/Firebase for newsletter subscriptions

4. Setup Instructions

Prerequisites:

- Node.js & npm → <u>Download here</u>
- React.js
- Git → <u>Download here</u>
- Visual Studio Code / IDE

Installation Steps:

```
# Clone repository
git clone <repository-url>
# Move into project
cd news
# Install dependencies
npm install
# Start development server
npm start
```

5. Folder Structure

6. Running the Application

• Frontend:

```
cd news
npm start
```

• Access: Visit http://localhost:3000

7. API Documentation

• Top Headlines:

```
GET
https://newsapi.org/v2/top-headlines?country=us&apiKey=YOUR_API_K
EY
```

• Category News:

GET

https://newsapi.org/v2/top-headlines?category={category}&apiKey=c7621400c0694416955e95cfa66795bd

Search Articles:

GET

 $https://newsapi.org/v2/everything?q={query}&apiKey=c7621400c06944\\16955e95cfa66795bd$

8. Authentication

- Not required for reading news.
- Optional: Email subscription via backend (Firebase/Mailchimp).

9. User Interface

- Landing Page: Hero section with trending news
- Category Page: Articles by category
- **Search Results Page:** Keyword-based news search
- Newsletter Section: Subscription form
- Footer: Navigation & contact links

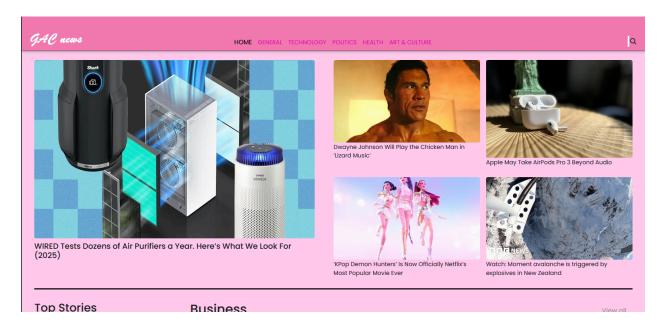
10. Testing

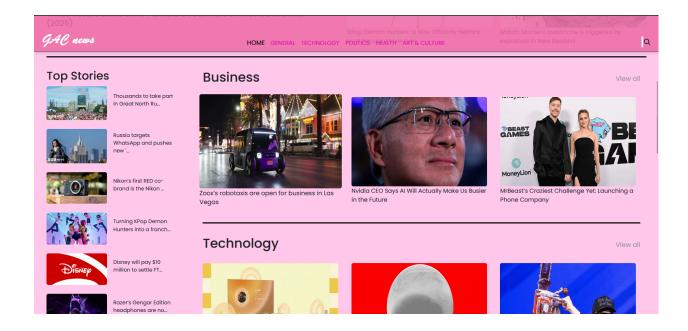
- Manual testing with:
 - Browser Dev Tools
 - Postman for API testing
- Responsive checks for mobile & desktop views

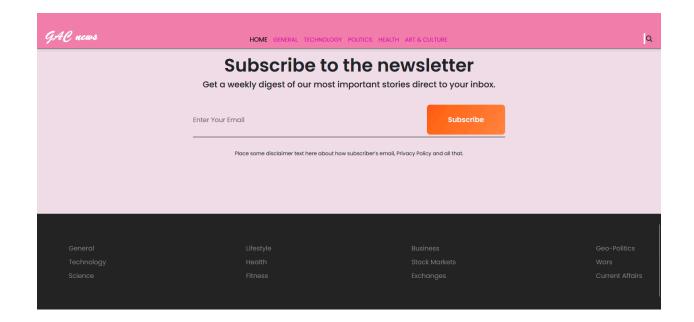
11. Demo

▶ Demo Video: Watch Here
► Source Code: Access Code

Screenshot:







12. Known Issues

- Limited to NewsAPI free tier (rate-limited).
- No user login system yet.
- Newsletter backend pending full integration.

13. Future Enhancements

- User authentication (login, bookmarks, preferences).
- Al-powered personalized news recommendations.
- Dark mode & accessibility improvements.
- Mobile app version.