# **INSIGHTSTREAM:NAVIGATE THE NEWS**

### 1. Introduction

Project Title: INSIGHTSTREAM:NAVIGATE THE NEWS

Team Members:

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## 2. Project Overview

## **Purpose**:

InsightStream is a revolutionary web application designed to redefine how users discover and consume news. It offers an intuitive interface, dynamic search, and a vast range of news categories to enhance the news exploration experience. The platform aggregates news from multiple sources and provides a seamless browsing experience for all types of users.

### **Features**:

- News from API Sources: Fetches real-time news updates from external APIs.
- Dynamic Search: Allows users to find relevant articles quickly.
- Categorized News: Users can explore news across multiple categories like Politics, Technology, Sports, Entertainment, and more.
- Trending News: Highlights the most discussed topics globally.
- User-Friendly Interface: Simple navigation and visually appealing UI.

### 3. Architecture

### **Component Structure:**

- 1. The React-based frontend is divided into the following major components:
- 2. Navbar: Contains navigation links for different sections.
- 3. Hero Section: Displays featured news articles.
- 4. Categories Component: Fetches and displays news by category.
- 5. Search Bar: Allows users to search for specific topics.
- 6. Trending News Component: Highlights breaking and popular news.
- 7. News List: Displays a list of articles with brief descriptions and images.
- 8. Footer: Contains additional links and credits.
- 9. State Management
- 10. Local State: Used for UI interactions and temporary states (e.g., toggles, form inputs).
- 11. Global State: Managed using React Context API to handle API data, user preferences, and search results.

## **Routing**

Uses React Router for smooth navigation:

 $/ \rightarrow$  Home page

/category/:categoryName → News filtered by category

/search/:query → News based on search queries

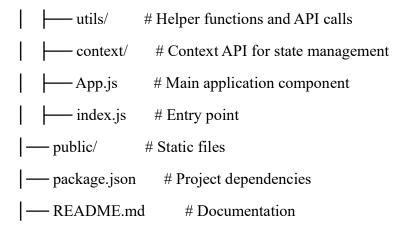
# 4. Setup Instructions

# **Prerequisites**

Ensure the following dependencies are installed:

1. Node.js & npm (Required to run the application)

2. Download Node.js		
3. Git (For version control)		
4. Download Git		
5. React.js (For building the frontend)		
Installation		
1. Clone the repository		
cd InsightStream		
2. Install dependencies npm install		
3. Run the development server npm start		
4. Open the application in a browser		
Go to http://localhost:3000		
5. Folder Structure		
InsightStream/		
components/ # Reusable UI components		
pages/ # Main page components (Home, Categories, Search)		
assets/ # Images, icons, and other assets		



# 6. Running the Application

• To start the frontend server locally:

npm start

• The application will be available at http://localhost:3000.

# 7. Component Documentation

## **Key Components**

- 1. Navbar.jsx: Contains navigation links for categories and search.
- 2. HeroSection.jsx: Displays the most trending news articles.
- 3. CategoryNews.jsx: Fetches and displays articles by category.
- 4. SearchResults.jsx: Displays search results based on user input.
- 5. NewsCard.jsx: Reusable component for displaying news articles.

6.	Footer.jsx: Contains credits and links.	
8. State Management		
1. •	Global State Managed using React Context API	
2.	Stores:	
•	API-fetched news articles	
3.	User search queries	
•	Favorite/saved articles	
4.	Local State	
•	Used for handling UI interactions such as toggles and modal visibility.	
9. Styling		
•	CSS Frameworks/Libraries	
•	Tailwind CSS (For utility-based styling)	

Bootstrap (For responsive UI components)

# **Theming**

- Dark Mode toggle
- Custom styles for different news categories

# 10. Testing

Testing Strategy:

- Unit Testing: Tests individual components using Jest and React Testing Library.
- Integration Testing: Ensures API requests work correctly.
- Code Coverage
- Uses Jest for test coverage reports.

## 11. Demo video

Live Demo: Demo Link

https://drive.google.com/file/u/0/d/1QeOfj6pHS6-ncc z6

### 12. Known Issues

- Search results delay: Sometimes, API requests take longer than expected.
- UI inconsistencies in some browsers: Some styling issues in Safari.

## 13. Future Enhancements

• User Authentication: Allow users to create accounts and save articles.

- Personalized News Feed: Customize news recommendations based on user preferences.
- Notifications: Send push notifications for breaking news.
- Dark Mode Improvements: Enhance theme switching experience.