**Frontend Development with React.js**

# InsightStream: Navigate the News

## Introduction

**Project Title: InsightStream:Navigation the News**

**Team Members:**

- S.Keethana –Team Leader
- S.Sandhiya –Team Member
- R.Sahanamary – Team Member
- K.Srikanth – Team Member

## Project Overview

**Purpose:**

InsightStream is a revolutionary web application designed to redefine how people discover and consume news. It provides an intuitive interface, dynamic search, and a vast range of news categories for all types of users.

**Features:**

- **News from API Sources**: Fetches news articles from external APIs using Rapid API integration.
- **Visual News Exploration**: Displays news through images and categories for easy navigation.
- **Advanced Search Feature**: Allows users to find news articles based on keywords and categories.
- **User-Friendly Design**: A seamless UI for smooth news consumption.
- **Subscription Feature**: Users can subscribe to receive daily news updates.

## Architecture

**Component Structure:**

- **Pages Folder**: Contains files for different routes such as Home, Categories, Search Results, and Article Page.

- **Components Folder**: Stores reusable components like Navbar, Hero Section, News Cards, Search Bar, and Footer.
- **Context Folder**: Manages state using Context API for global data handling.
- **Styles Folder**: Contains CSS files for styling the application.

## State Management:

- **Context API** is used for global state management, ensuring efficient data flow across components.

## Routing:

- Utilizes **React Router Dom** for seamless navigation between different pages.

# Setup Instructions

## Prerequisites:

- **Node.js and npm** (https://nodejs.org/en/download/)
- **Git** (https://git-scm.com/downloads)
- **Code Editor** (Visual Studio Code recommended: https://code.visualstudio.com/download)

## Installation:

1. Clone the repository from Google Drive:
2. `git clone [repository link]`
3. Navigate to the project directory:
4. `cd news-app-react`
5. Install dependencies:
6. `npm install`

# Folder Structure

- **src/**
  - **components/** (Reusable UI components)
  - **context/** (State management files)
  - **pages/** (Individual page components)
  - **styles/** (CSS and styling files)
  - **assets/** (Images and static resources)

# Running the Application

To start the development server, run:

```
npm start
```

The application will be accessible at [https://github.com/Keerthanaselvam26/news_app.git](https://github.com/Keerthanaselvam26/news_app.git)

# Component Documentation

## Key Components:

- **Navbar**: Provides navigation across the app.
- **Hero Section**: Displays trending news and a search bar.
- **Category Cards**: Shows different news categories.
- **News List**: Fetches and displays news articles.
- **Article Page**: Redirects users to full news articles.

## Reusable Components:

- **Button**: Standard button component.
- **SearchBar**: Search functionality for finding articles.
- **NewsCard**: Displays individual news articles.

# State Management

## Global State:

- Managed using **Context API**, ensuring efficient data sharing across components.

## Local State:

- Component-level state managed using React's **useState** and **useEffect** hooks.

# User Interface

- **Home Page**: Displays trending news and popular categories.
- **Search Page**: Lists articles based on user search queries.
- **Article Page**: Displays full news articles fetched from API.
- **Subscription Section**: Allows users to subscribe to daily updates.

# Styling

## CSS Frameworks/Libraries:

- **Tailwind CSS** for styling ([https://tailwindcss.com/](https://tailwindcss.com/))
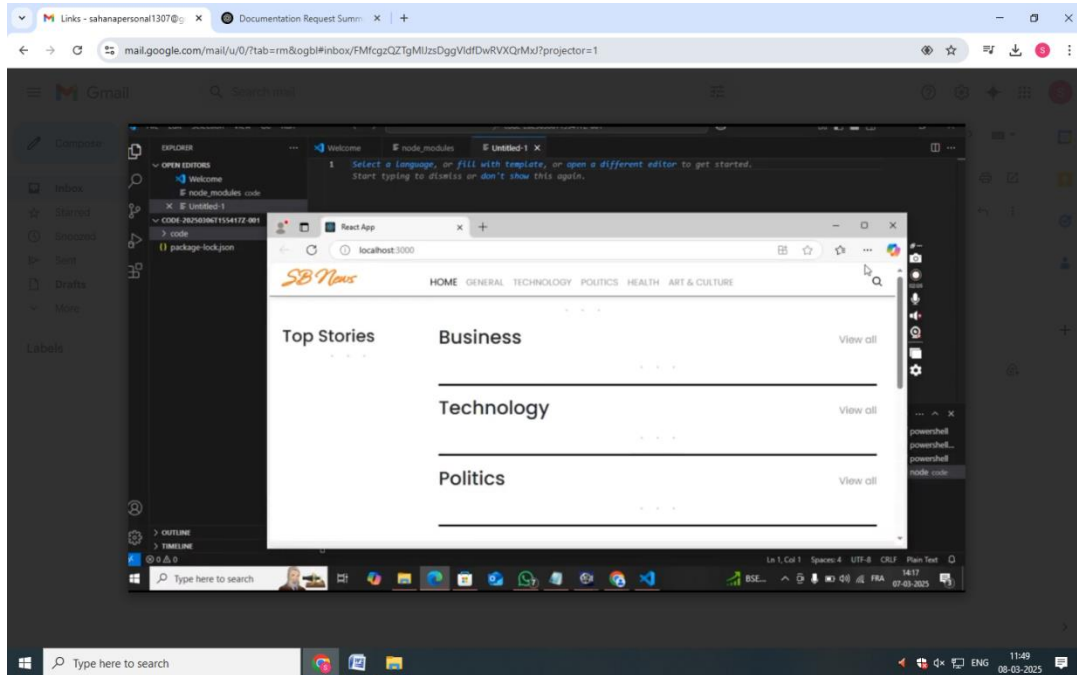
- **React Icons** for UI icons

# Testing:

**Testing Strategy:**

- Unit tests using **Jest** and **React Testing Library**.
- Integration tests for API calls and UI interactions.

# Screenshots or Demo

- Project Demo: https://drive.google.com/file/d/10e-dl7X3cgvsvbxMl0CFqRyywZxDk5vR/view?usp=drivesdk
- Screenshot :



- # Known Issues

- API rate limits may cause restricted access to news articles.
- Some articles might have missing images depending on the source.

# Future Enhancements

- **Dark Mode**: Implementing a dark theme for better user experience.
- **User Authentication**: Allowing users to personalize their news feed.

- **Commenting System**: Enabling discussions on news articles.

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