

**C. S. I. Ewart Women's Christian College**  
**Department of Computer Science**

**Frontend Development with React.js**  
**Project Documentation**

### 1.Introduction

- **Project Title:** InsightStream: Navigate the News Landscape
- **Team Members:**
  1. Narmadha.S - 689B3022C7B38CEB49E49C0E36F65F51
  2. Sneha priyadharshini.B - OB3A4F2390F2566BFD34859E07D3FFA9
  3. Deepalakshmi.R - D47651127E6344A8CA14C36268AD6172
  4. Pavithra.P - 51EE147D347F10EACEA40C128E7D53B0
  5. Deva Magima.C - DF8BF695B520F62ADA8484F7D5C9BEA1

### 2.Project Overview

- **Purpose:** InsightStream is a web application designed to revolutionize news consumption by providing an intuitive interface, dynamic search, and categorized news feeds. It aims to offer users an engaging and seamless experience while staying informed.
- **Features:**
  1. Fetches news from API sources
  2. Advanced search functionality
  3. User-friendly and intuitive UI
  4. Categorized news sections
  5. Image-based news discovery
  6. Responsive design for multiple devices

### 3.Architecture

- **Component Structure:**
  1. App.js: Root component
  2. Header.js: Navigation bar
  3. NewsList.js: Displays news articles
  4. NewsItem.js: Individual news card component
  5. SearchBar.js: Search functionality
  6. CategoryFilter.js: Filters news by category
- **State Management:** Managed using React's useState and useEffect hooks, Global state for news data handled via Context API
- **Routing:** Implemented using React Router, Routes for different categories and article details

## 4.Setup Instructions

- **Prerequisites:** Node.js and npm, Git, React.js knowledge
- **Installation:**
  1. Clone the repository:  
`npx create-react-app my-react-app`
  2. Navigate to the project directory:  
`cd news-app-react`
  3. Install dependencies:  
`npm install`
  4. Start the development server:  
`npm start`

## 5.Folder Structure

1. `src/components/` - Contains reusable React components
2. `src/pages/` - Includes main pages (e.g., Home, News, Categories)
3. `src/assets/` - Holds images, icons, and styling assets
4. `src/utlis/` - Helper functions and custom hooks

## 7. Component Documentation

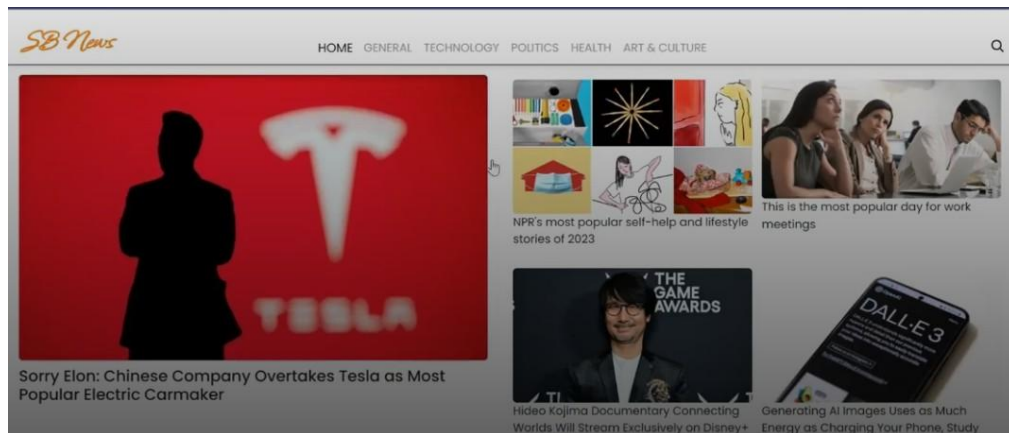
- **Key Components:**
  1. `NewsList.js`: Fetches and displays news articles
  2. `SearchBar.js`: Filters news based on search queries
  3. `CategoryFilter.js`: Allows users to browse different news categories
- **Reusable Components:**
  1. `Button.js`: Custom buttons used across the app
  2. `Card.js`: Standardized card layout for articles

## 8. State Management

- **Global State:** Managed via Context API to share news data across components
- **Local State:** Handled using `useState` for user interactions such as toggling categories

## 9. User Interface

- Features a clean, modern UI with a simple navigation system
- **Screenshots**



## 10. Styling

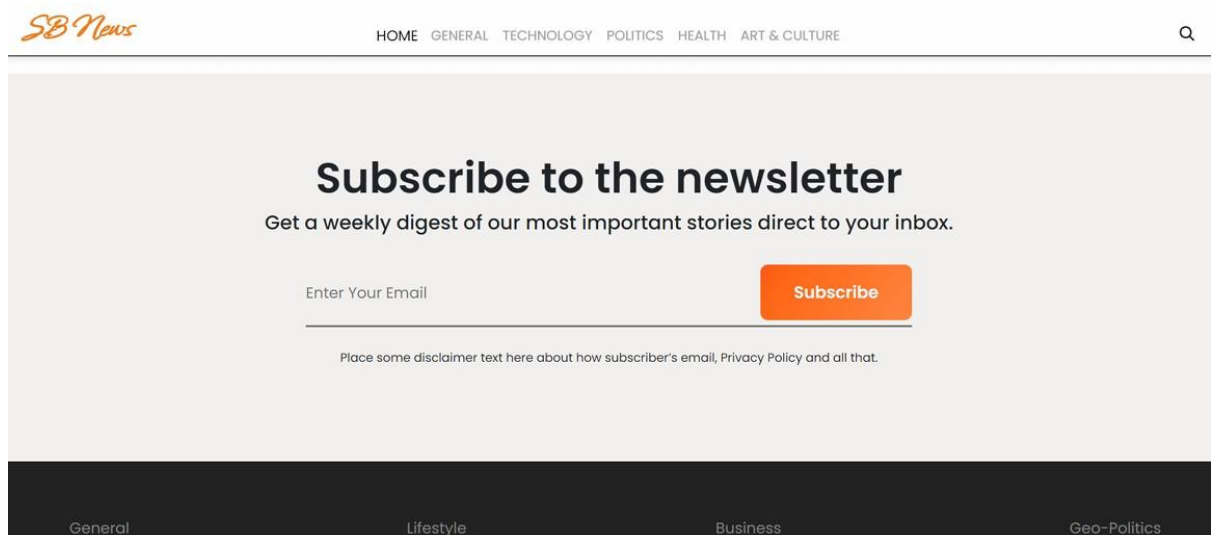
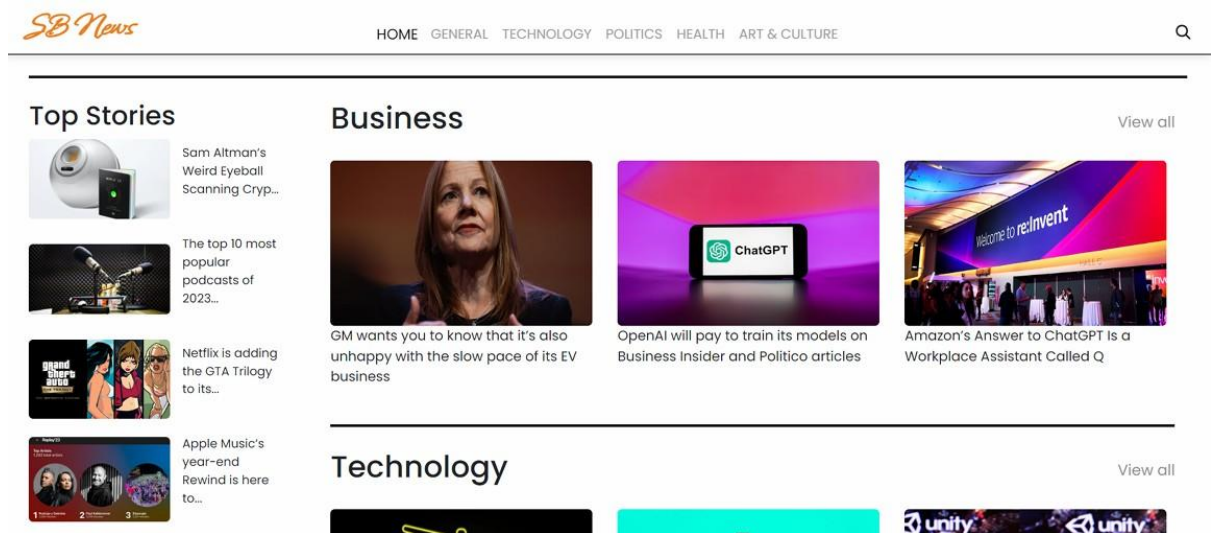
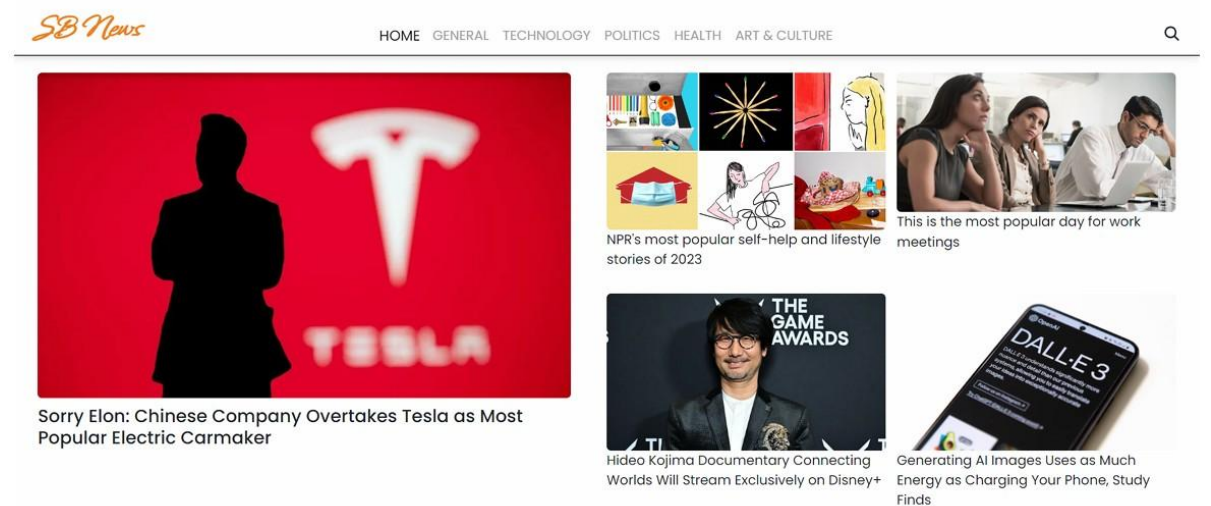
- **CSS Frameworks/Libraries:**
  - Uses **CSS Modules** for component-based styling
  - Additional styles implemented with **Styled Components**
- **Theming:**
  - Light and dark mode support (planned for future updates)

## 11. Testing

- **Testing Strategy:**
  - **Unit Testing:** Using Jest for testing individual components
  - **Integration Testing:** Using React Testing Library
- **Code Coverage:**
  - Configured Jest to generate test coverage reports

## 12. Screenshots or Demo

- **Demo Link:** <https://drive.google.com/file/d/1qnCY-AtqNz5sZsfZVXbykyHHLm568EQu/view?usp=sharing>
- **Screenshots:**



### 13. Known Issues

- API rate limits may affect data retrieval
- Search functionality may require optimization for better accuracy

- UI responsiveness improvements needed for smaller screen sizes

#### **14. Future Enhancements**

- **User Authentication:** Enable personalized news feeds
- **Bookmarking Feature:** Allow users to save articles for later
- **Dark Mode Support:** Improve accessibility for different viewing preferences
- **Real-time News Updates:** Auto-refresh news feed with latest headlines