

Frontend Development with React.js

Project Documentation

Introduction

Project Title: NewsApp - Jōhō Nyūsu

Team Members:

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Project Overview

- Purpose:
JŌHŌ NYŪSU (INFO NEWS), developed based on InsightStream, is a groundbreaking web application designed to transform how users explore and consume news. Featuring an intuitive interface, dynamic

search capabilities, and an extensive range of news categories, it offers an enriched news experience.

- **Features:**
 - **API-Driven News:** Access a vast array of global news across multiple categories.
 - **Visual Exploration:** Engaging image-based galleries enhance news discovery.
 - **Advanced Search:** Easily find articles on specific topics through intelligent filtering.
 - **User-Centric Design:** A modern interface optimized for smooth navigation.

Architecture

- **Component Structure:**

The project follows a modular approach, where components are categorized into reusable UI elements

 - **Navbar Component** – Contains site navigation and search bar
 - **Hero Component** – Displays featured news articles
 - **Categories Component** – Shows different news categories
 - **NewsCard Component** – Renders individual news articles
 - **Footer Component** – Contains site information and links
 - **Context API** – Manages global state
- **State Management:**

The application uses the React Context API for global state management, ensuring seamless data flow across components.
- **Routing:**

React Router DOM is used for seamless navigation across different pages.

Setup Instructions

- Prerequisites:
 - Node.js & npm: Install and configure for JavaScript execution.
 - Download: <https://nodejs.org/en/download/>
 - Git Version Control: Use platforms like GitHub for collaboration.
 - Download: <https://git-scm.com/downloads>
 - Development Environment: Recommended editors include Visual Studio Code, Sublime Text, or WebStorm.

- Installation:

Clone the repository and install dependencies:

```
cd NewsApp-Jōhō Nyūsu  
npm install
```

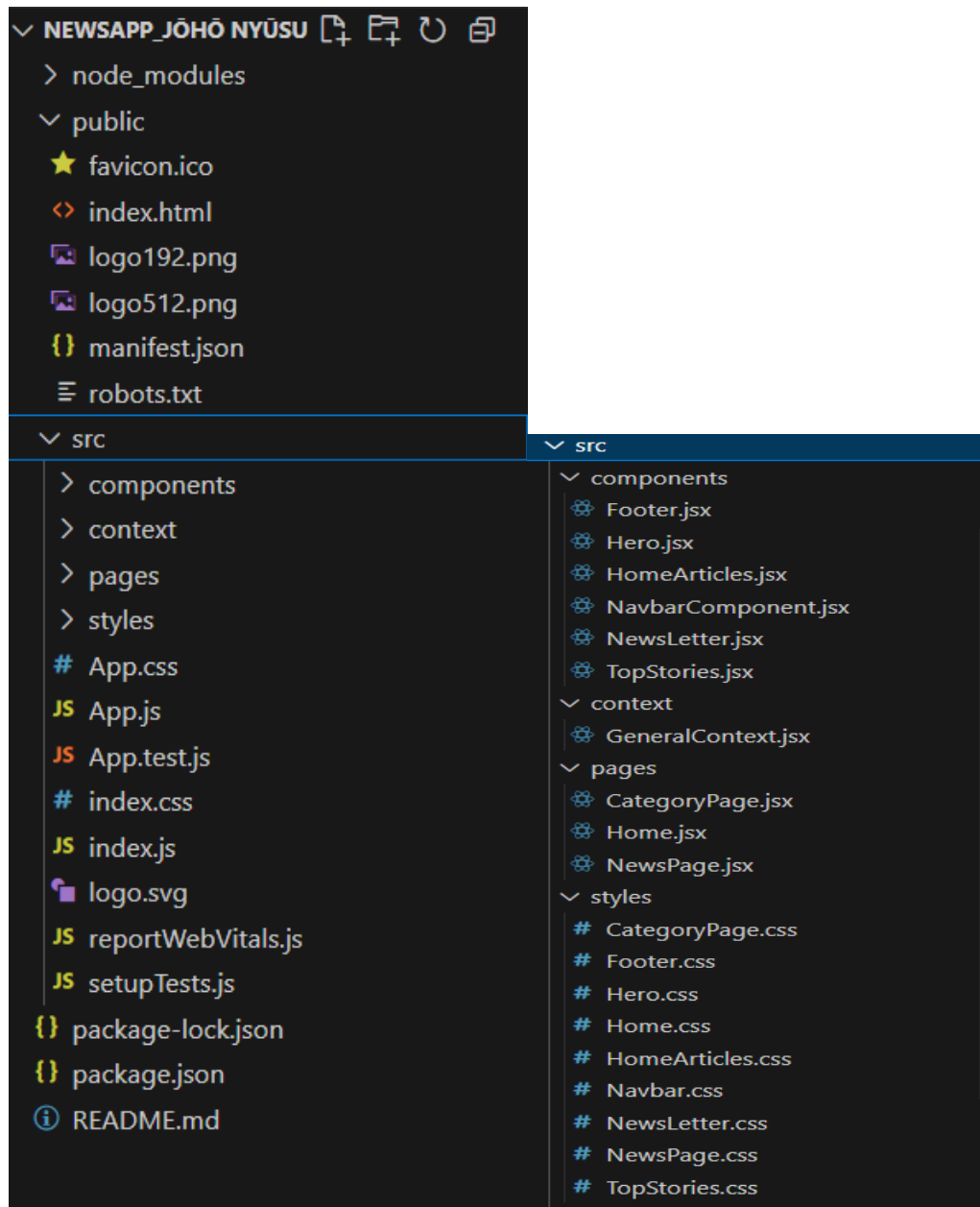
Folder Structure

- Client:

The project is organized into primary folders:

 - Components: Houses reusable UI elements.
 - Context: Contains the Context API for global state management.
 - Pages: Stores page-specific components that map to different URLs.
 - Styles: Includes all CSS files for styling.
- Utilities:

Includes helper functions and API integration functions.



Running the Application

- Start the development server:
`npm start`
- Open a browser and visit `http://localhost:3000` to access the application.

Component Documentation

- Key Components:
 - Hero Component: Showcases trending news along with a search bar.

- Popular Categories: Highlights categorized news articles.
- Newsletter Subscription: Allows users to subscribe for updates.
- Redirected Article Page: Displays the full article from the original source.

- Reusable Components:

The application uses reusable UI components to maintain consistency and enhance development efficiency.

State Management

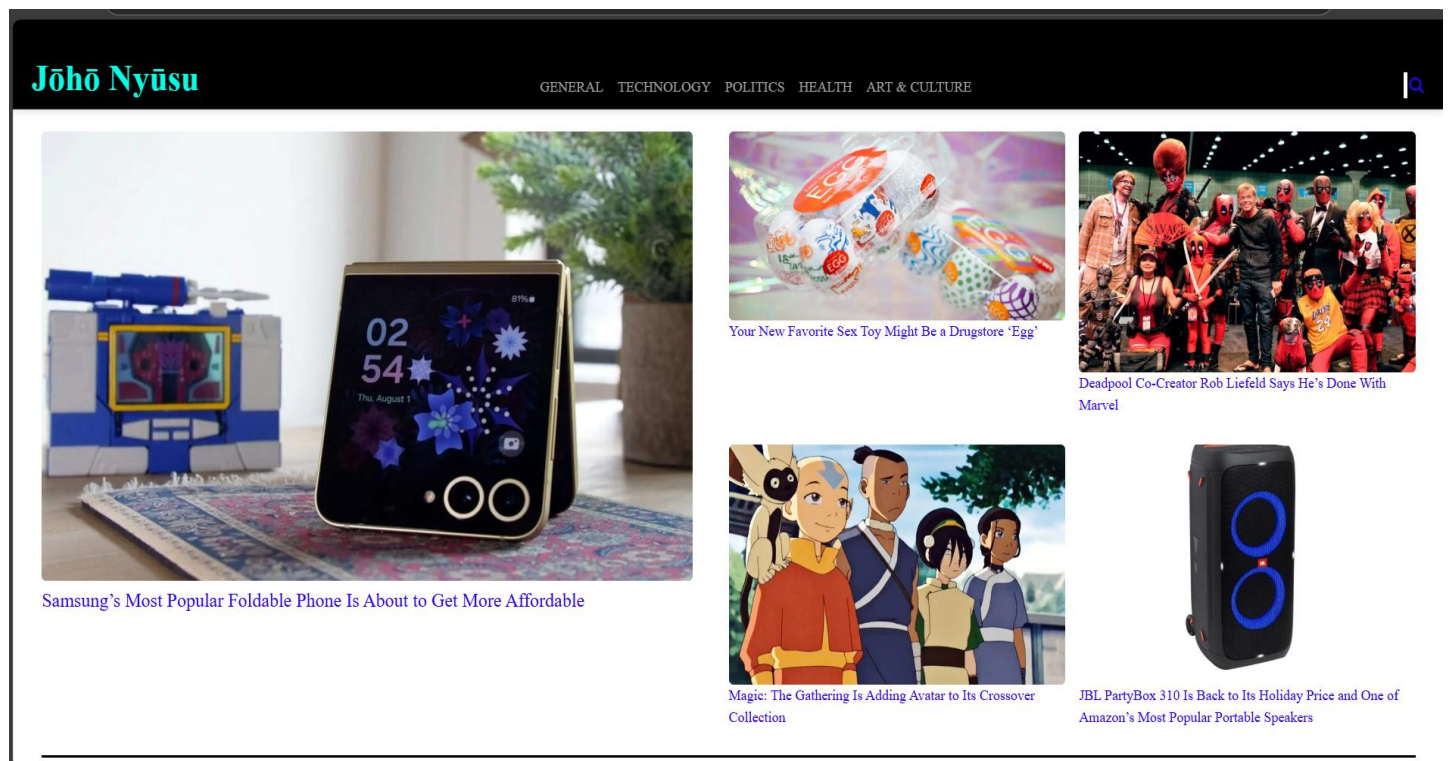
- Global State:

The Context API is utilized to store and manage global application state efficiently.


- Local State:

Local state is managed within components where necessary to ensure smooth UI interactions.


User Interface




Top Stories




Call for food influencers to post 'more ...




The Nintendo DS Drastic emulator is gone...




iPhone SE Likely to Become More Popular ...



Apple Says 'Severance' Is Now More Popul...



'Wicked': Streaming Release Date and How...



Business

View all



Can Tech Save Small Ski Resorts From Extinction?



Deal to buy Prince Andrew's business unravels



People Are Paying Millions to Dine With Donald Trump at Mar-a-Lago

Technology

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placeholder
Samsung's Digital Key technology now works with Volvo and Polestar EVs



Jōhō Nyūsu

GENERALTECHNOLOGYPOLITICSHEALTHART & CULTURE

Search

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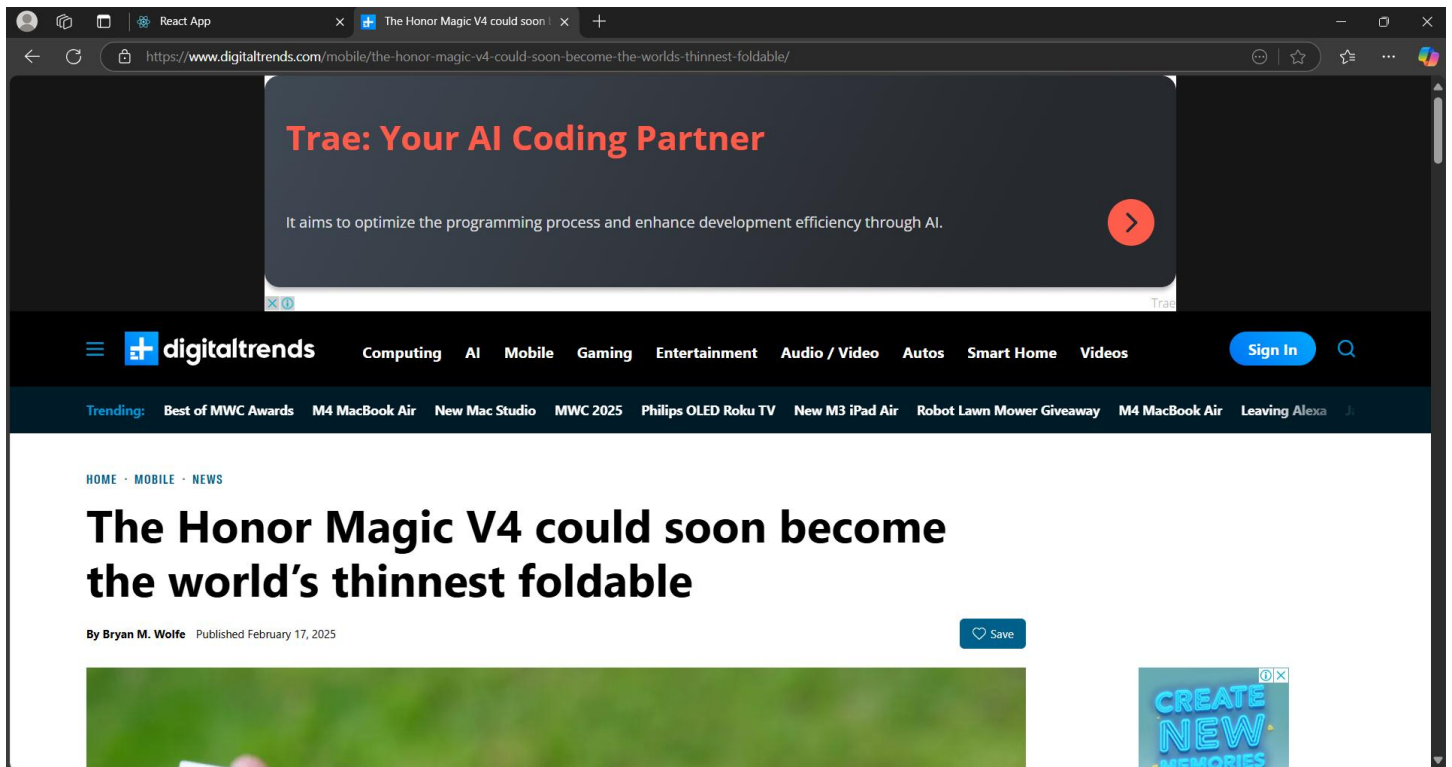
General

Lifestyle

Business

Geo-Politics

- NEWS LETTER



*ReDirect article to source webpage(from search bar)

Styling

- **CSS Frameworks/Libraries:**
The project uses Tailwind CSS for rapid styling and design consistency.
- **Theming:**
Custom design systems are implemented to maintain brand identity and usability.

Testing

- **Testing Strategy:**
Unit and integration testing is performed using Jest and React Testing Library to ensure component reliability.
- **Code Coverage:**
Testing coverage is maintained using Jest's built-in coverage reporting.

Screenshots or Demo

- [link to a demo](#) showcasing the application's features and design.
- Here is some codesnippets screenshots below

```
const [categoryNews, setCategoryNews] = useState([]);

const {id} = useParams();
useEffect(() => {
  if (id){
    fetchNews(id)
  }
}, [window.location.pathname])

const fetchNews = async (id) => {
  try {
    const response = await axios.get(`https://newsapi.org/v2/everything?q=${id}&apiKey=112bf7d8d5084b9fa3651543c423a5c4`);
    setCategoryNews(response.data.articles);
  } catch (error) {
    console.error(error);
  }
}
```



```
const fetchTopNews = async () => {
  try {
    const response = await axios.get("https://newsapi.org/v2/everything?q=popular&apiKey=112bf7d8d5084b9fa3651543c423a5c4");
    setTopNews(response.data.articles);
  } catch (error) {
    console.error(error);
  }
}
```

Tabnine | Edit | Explain

```
const NavbarComponent = () => {

  const [active, setActive] = useState('Home');

  const navigate = useNavigate();

  const [search, setSearch] = useState('');

  const handleSearch = () =>{
    if (search){
      navigate(`/category/${search}`)
      setSearch('');
    }
  }
}
```

```
<div className='navbar'>
  <div className='navbar_logo'>
    <h2 onClick={()=> {setActive("Home"); navigate("/")}} >Jōhō Nyūsu</h2>
  </div>
  <div className='navbar_links'>
    <p className={active === 'Home' ? 'active' : ''} onClick={()=> {setActive("Home"); navigate("/")}} >Home</p>
    <p className={active === 'General' ? 'active' : ''} onClick={()=> {setActive("General"); navigate("/category/general")}} >General</p>
    <p className={active === 'Technology' ? 'active' : ''} onClick={()=> {setActive("Technology"); navigate("/category/technology")}} >Technology</p>
    <p className={active === 'Politics' ? 'active' : ''} onClick={()=> {setActive("Politics"); navigate("/category/politics")}} >Politics</p>
    <p className={active === 'Health' ? 'active' : ''} onClick={()=> {setActive("Health"); navigate("/category/health")}} >Health</p>
    <p className={active === 'Art & Culture' ? 'active' : ''} onClick={()=> {setActive("Art & Culture"); navigate("/category/art&culture")}} >Art & Culture</p>
  </div>
  <div className='navbar_search'>
    <input className='search-input' type="text" placeholder="Search" onChange={(e) => setSearch(e.target.value)} value={search} />
    <IoSearch className='search-icon' onClick={()=> handleSearch()} />
  </div>
</div>
```

Known Issues

- API rate limits from NewsAPI.org can sometimes block requests.
- Occasional delays when fetching large datasets.

Future Enhancements

- Implement a bookmarking feature for saving favorite articles.
- Add user authentication for personalized news feeds.
- Introduce push notifications for breaking news.
- Expand API sources for a richer news experience.