

# **INSIGHTSTREAM: NAVIGATE THE NEWS LANDSCAPE (REACT APPLICATION)**

## **1.INTRODUCTION**

InsightStream is a revolutionary web application designed to redefine how people discover and consume news. It offers an intuitive interface, dynamic search, and a vast range of news categories for all types of users. Join InsightStream to embark on an informative journey and experience the future of news consumption.

- **PROJECT TITLE:** INSIGHTSTREAM: NAVIGATE THE NEWS
- **TEAM LEADER:** HARI HARAN S
- **TEAM MEMBERS:** GNANA SOUNDHAR P, GOKULA KRISHNAN N,  
GOWTHAM M

## **2.PROJECT OVERVIEW**

### **PURPOSE:**

- InsightStream is a web application designed to redefine how people discover and consume news. It offers an intuitive interface, dynamic search, and various news categories, providing a seamless and engaging news exploration experience.

### **FEATURES:**

- Access news from multiple API sources.
- Visual news exploration through curated image galleries.
- Advanced search functionality to find specific news articles.
- Intuitive design with a clean and modern user interface.:

## **3.ARCHITECTURE**

### **COMPONENT STRUCTURE:**

The project is structured into four main folders:

- Components: Houses reusable UI components such as the Navbar, Hero Section, News Cards, and Search Bar.
- Pages: Contains pages such as the homepage, category pages, and article detail pages.
- Context: Manages state using React Context API.
- Styles: Contains all the CSS files for styling.

### **STATE MANAGEMENT:**

- Uses React's Context API to manage global state.
- Local state is handled within individual components for UI interactions.

### **ROUTING:**

- React Router DOM is used for client-side routing.
- Users can navigate between categories, search results, and individual articles seamlessly.

## 4.SETUP INSTRUCTIONS

Here are the key prerequisites for developing a frontend application using React.js:

- **Node.js and npm:**

Node.js is a powerful JavaScript runtime environment that allows you to run JavaScript code on the local environment. It provides a scalable and efficient platform for building network applications.

Install Node.js and npm on your development machine, as they are required to run JavaScript on the server-side.

- Download: <https://nodejs.org/en/download/>
- Installation instructions: <https://nodejs.org/en/download/package-manager/>

- **React.js:**

React.js is a popular JavaScript library for building user interfaces. It enables developers to create interactive and reusable UI components, making it easier to build dynamic and responsive web applications.

Install React.js, a JavaScript library for building user interfaces.

- Create a new React app:  
**npm create-react-app my-react-app**
- Replace my-react-app with your preferred project name.
- Navigate to the project directory:

**cd my-react-app**

- Running the React App:

With the React app created, you can now start the development server and see your React application in action.

- Start the development server:

**npm start or npm run dev**

This command launches the development server, and you can access your React app at <http://localhost:3000> in your web browser.

- **HTML, CSS, and JavaScript:** Basic knowledge of HTML for creating the structure of your app, CSS for styling, and JavaScript for client-side interactivity is essential.
- **Version Control:** Use Git for version control, enabling collaboration and tracking changes throughout the development process. Platforms like GitHub or Bitbucket can host your repository.
  - Git: Download and installation instructions can be found at: <https://git-scm.com/downloads>
- **Development Environment:** Choose a code editor or Integrated Development Environment (IDE) that suits your preferences, such as Visual Studio Code, Sublime Text, or WebStorm.
  - Visual Studio Code: Download from <https://code.visualstudio.com/download>
  - Sublime Text: Download from <https://www.sublimetext.com/download>
  - WebStorm: Download from <https://www.jetbrains.com/webstorm/download>

To install and run the Application project from google drive:

Follow below steps:

- **Get the code:**
  - Download the code from the drive link given below:  
[https://drive.google.com/drive/folders/1tDoSwd-1I3HsPJ9\\_92MnZTUtteeda-hL?usp=sharing](https://drive.google.com/drive/folders/1tDoSwd-1I3HsPJ9_92MnZTUtteeda-hL?usp=sharing)
- **Install Dependencies:**
  - Navigate into the cloned repository directory and install libraries:

```
cd news-app-react npm
install
```

- **Start the Development Server**

- To start the development server, execute the following command:

**npm start**

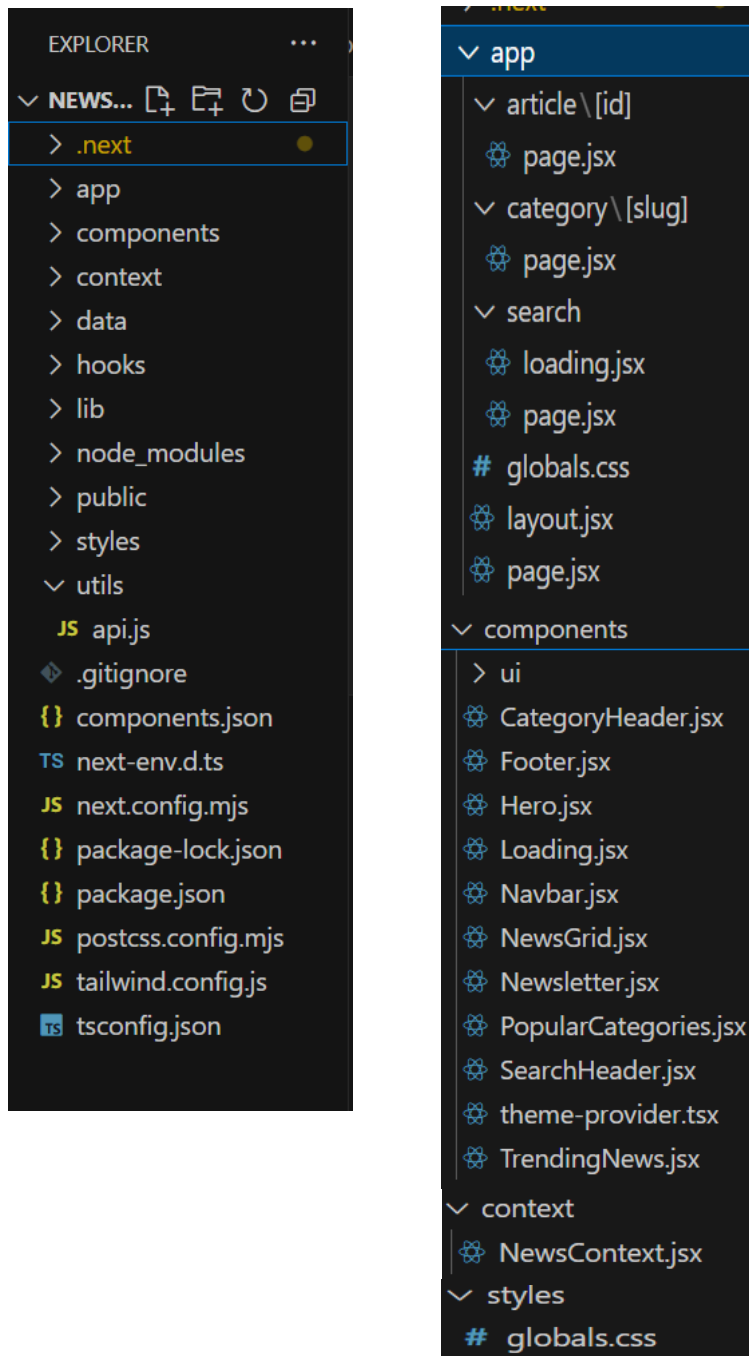
**Access the App:**

- Open your web browser and navigate to <http://localhost:3000>.
- You should see the applications homepage, indicating that the installation and setup were successful.

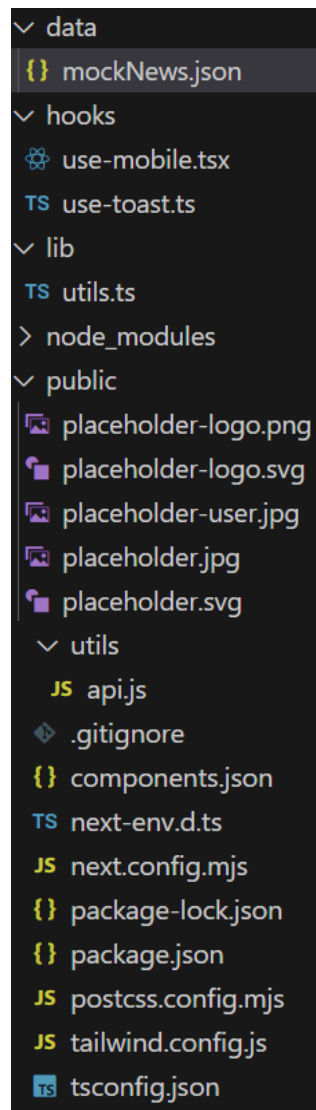
You have successfully installed and set up the application on your local machine. You can now proceed with further customization, development, and testing as needed.

## 5.FOLDER STRUCTURE

CLIENT:



UTILITIES:



## 6.RUNNING THE APPLICATION

To run the application locally:

Navigate to the project folder and execute:

- **npm start**

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

## 7.COMPONENT DOCUMENTATION

### Key Components:

- Navbar: Navigation bar with links to categories and search.
- Hero Section: Displays trending news headlines dynamically.
- News Cards: Displays individual news articles.
- Search Bar: Allows users to search for news articles by keyword.

### Reusable Components:

- Button Component: Styled button used across the app.
- Loader Component: Displays loading state when fetching news.

## 8.STATE MANAGEMENT



**GLOBAL STATE:**

- Managed using Context API for storing user preferences, bookmarks, and fetched news articles.

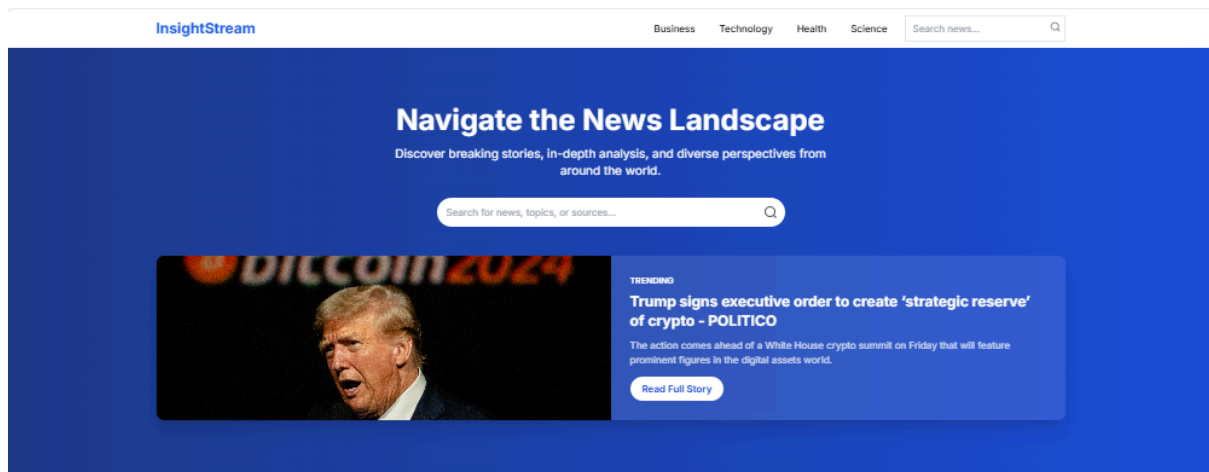
**LOCAL STATE:**

- Managed using React's useState for UI interactions such as search input and dropdown selections.

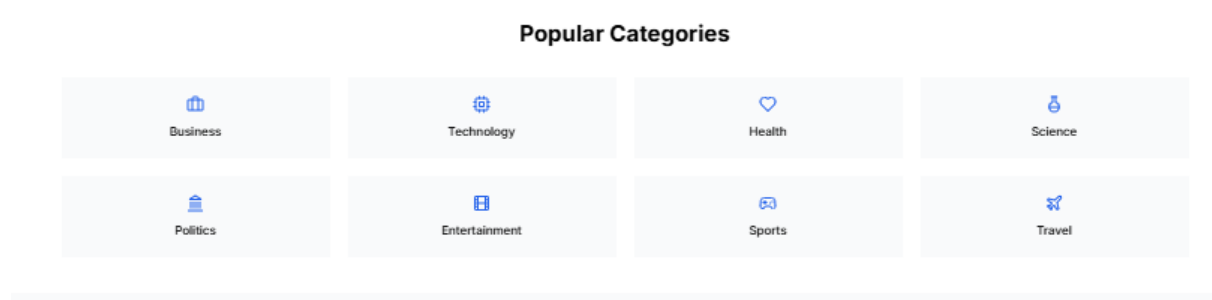
## **9.USER INTERFACE**

**SCREENSHOTS OR GIFS SHOWCASING DIFFERENT UI FEATURES,  
INCLUDING:**

**HOMEPAGE WITH TRENDING NEWS:**



**CATEGORY PAGES:**




ARTICLE DETAIL PAGE:

ECONOMY

Trump signs executive order to create 'strategic reserve' of crypto


The action comes ahead of a White House crypto summit on Friday that will feature prominent figures in the digital assets world.




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Covered California is simplifying healthcare access with Google AI



Donald Trump speaks at a cryptocurrency conference in Nashvi



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SEARCH FUNCTIONALITY


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BusinessTechnologyHealthScience

Search news... Q

Q Search Results

Found 92 results for "business"




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The small Colorado company Entabeni Systems is quietly working to upend the ski industry with a business model built on handshake deals made in ski resort parking lots.

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<b>InsightStream</b> A revolutionary web application designed to redefine how people discover and consume news. 	<b>Categories</b> <a href="#">Business</a> <a href="#">Technology</a> <a href="#">Health</a> <a href="#">Science</a> <a href="#">Entertainment</a>	<b>Company</b> <a href="#">About Us</a> <a href="#">Contact</a> <a href="#">Careers</a> <a href="#">Privacy Policy</a> <a href="#">Terms of Service</a>	<b>Contact Us</b> 123 News Street Media City, MS 12345 United States Email: <a href="mailto:info@insightstream.com">info@insightstream.com</a> Phone: +1 (555) 123-4567
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## 10.STYLING

### CSS FRAMEWORKS/LIBRARIES:

- The project uses Bootstrap and Tailwind CSS for pre-built styles, utility classes, and responsive design.
- Global styles and reusable utility classes are managed using Tailwind CSS.
- Bootstrap components are used for layout, grids, and pre-defined styles.
- Inline styles are applied for specific component-level customizations where necessary.
- This ensures the documentation properly explains the styling approach without including actual CSS code.

### INLINE STYLES:

- Some components use inline CSS for quick styling adjustments and dynamic styles.

## **11.TESTING**

Testing ensures that the InsightStream application is stable, reliable, and performs well across different scenarios. The project follows a structured approach to test various components and functionalities, ensuring a seamless news-browsing experience for users.

### **TESTING STRATEGY**

#### **Unit Testing**

- Each React component is tested individually to verify its rendering and behavior.

#### **Example:**

- Testing if the Navbar component renders correctly with all navigation links.
- Checking if the Search Bar properly updates user input.
- Verifying that the Category Cards display correct titles and images.

#### **Integration Testing**

- Ensures that multiple components work together as expected.

#### **Example:**

- Selecting a news category should update the displayed news articles.
- Clicking on a trending news article should redirect to the Article Detail Page.
- The Subscription Form should validate user input and store data.

## **End-to-End (E2E) Testing**

- Simulates real user interactions to ensure the application flows correctly.

### **Example:**

- A user searches for "Technology" and gets relevant news articles.
- A user clicks on an article and is redirected to the original news source.
- The Newsletter Subscription Form successfully registers an email.

## **Tools Used for Testing**

- Jest – Used for unit and component testing in React.
- React Testing Library – Tests user interactions with components.
- Cypress (Optional for E2E Testing) – Automates user journeys like searching and clicking news articles.

## **Code Coverage**

- The project ensures thorough test coverage using Jest.
- Run the following command to generate a test coverage report:

Now Type this Command in the Terminal or Command Prompt

- **npm test -- --coverage**

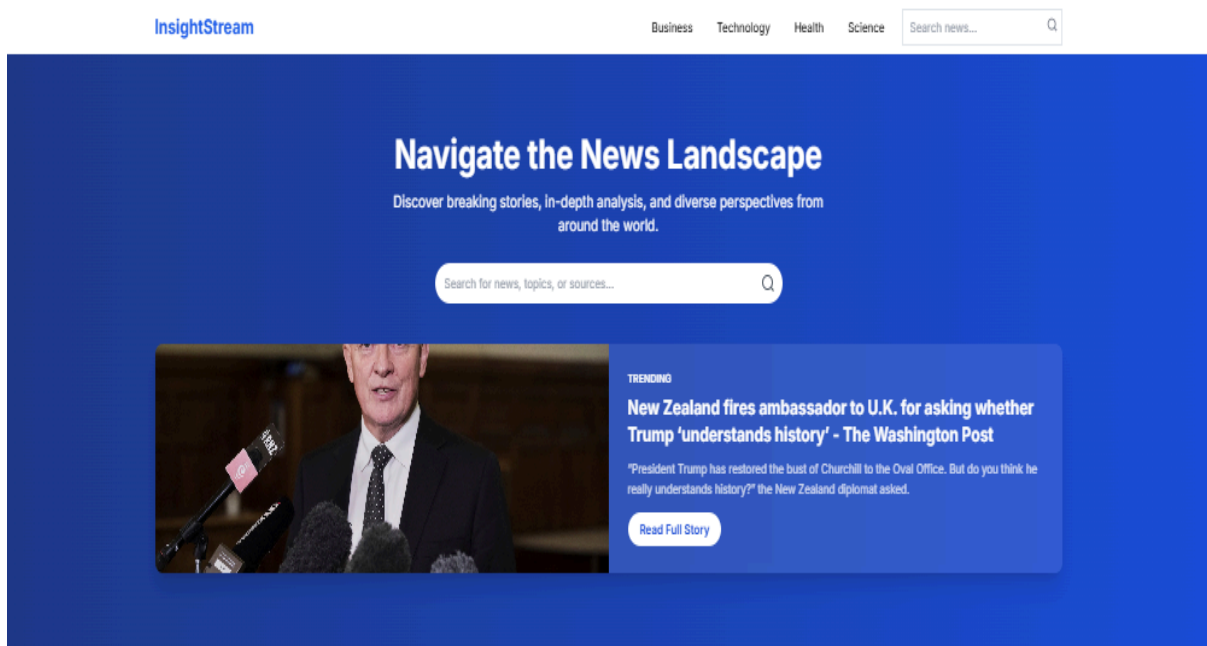
**Test coverage includes:**

- Component Coverage: Ensures all UI components render correctly.
- Functionality Coverage: Validates that API calls fetch news correctly.
- Navigation Coverage: Confirms smooth routing between pages.

This structured testing approach ensures InsightStream delivers a smooth and bug-free user experience.


## 12.SCREENSHOTS OR DEMO

### HOME PAGE WITH TRENDING NEWS :




# CATEGORIES

## Popular Categories



Business




Technology



Health



Science




Politics



Entertainment




Sports



Travel


## Trending News



**New Zealand fires ambassador to U.K. for asking whether Trump 'understands history' - The...**

"President Trump has restored the bust of Churchill to the Oval Office. But do you think he really understands history?" the New Zealand diplomat asked.


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**Trump creates a Strategic Bitcoin Reserve one day ahead of White House crypto summit - CNN**

President Donald Trump established a Strategic Bitcoin Reserve and a stockpile of other digital assets through an executive order on Thursday, shortly before hosting a...


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**David Hasselhoff's ex-wife Pamela Bach 'looked sad' in the final days before her suicide: neighbor...**

Pamela Bach's neighbor last saw her on Monday, two days before her suicide.


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**Second death reported in growing measles outbreak - The Washington Post**

The death of a New Mexico adult comes after a 6-year-old died of the disease in Texas last week.

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**Medical plane's voice recorder likely wasn't working for years before Philadelphia crash - The...**

The National Transportation Safety Board says a cockpit voice recorder was not working on a medical transport plane that crashed in Philadelphia in January and likely ha...

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Found 92 results for "BUSINESS"



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The small Colorado company Entabeni Systems is quietly working to upend the ski industry with a business model built on handshake deals made in ski resort parking lots.

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An Indian drug maker tells a BBC undercover team its addictive cocktail drug is "very harmful" but "this is business".

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## SEARCH RESULT



## Health News

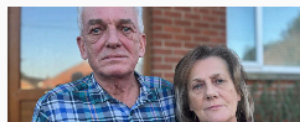
Stay updated with the latest health news from around the world. Discover breaking stories, in-depth analysis, and expert opinions.



### Second death reported in growing measles outbreak - The Washington Post

The death of a New Mexico adult comes after a 6-year-old died of the disease in Texas last week.

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### Cedar: Woman being evicted from supported living home, say parents - BBC.com

Laura Sharp, 39, has been living at The Mews in west Belfast for seven years.

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### Kennedy touts unconventional therapies for measles linked to disciplined Texas doctor - Yahoo

A team from the US Centers for Disease Control and Prevention arrived in Texas this week to aid in the response to a growing measles outbreak, and US Health ...

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### AI-Powered Brain Implant Lets Paralyzed Man Control Robotic Arm - Neuroscience News

A new brain-computer interface (BCI) has enabled a paralyzed man to control a robotic arm by simply imagining movements.

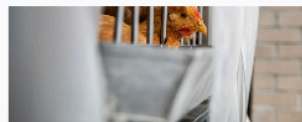
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### Common vaginal condition is really an STD, study finds - CNN

Bacterial vaginosis, which affects nearly 1 in 3 women, should be considered a sexually transmitted disease, according to a new study.

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### Avian flu outbreaks in Queens spark further calls to shut down all overcrowded NYC wet markets - QNS

The resurgence of avian flu at two animal slaughter markets in Queens has renewed urgent calls to shut down densely packed wet markets.

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## HEALTH NEWS

# TECHNOLOGY NEWS


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BusinessTechnologyHealthScience

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Technology News

Stay updated with the latest technology news from around the world. Discover breaking stories, in-depth analysis, and expert opinions.




**2 Game Boy games available for Switch Online members - My Nintendo News**

Nintendo has been very active with the Nintendo Switch Online + Expansion Pack retro libraries lately. Although it varies which retro library Nintendo updates, Nintendo's...

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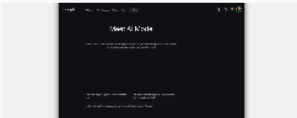


**"Literally just a copy"—hit iOS game accused of unauthorized HTML5 code theft - Ars Technica**

Web game illicitly "wrapped in a mobile shell" climbed the paid App Store charts.

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**Google Search starts rolling out access to AI Mode [Gallery] - 9to5Google**

Following yesterday's announcement, Google is rolling out access to Search's new AI Mode experiment for Google One AI Premium subscribers.

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**Google co-founder Larry Page reportedly has a new AI startup - TechCrunch**

Google co-founder Larry Page is said to be building a new company called Dynatronics that's focused on applying AI to product manufacturing.

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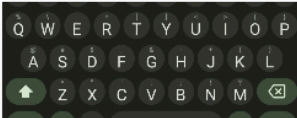


**Apple Says New MacBook Air Up to 23x Faster Than Intel-Based Model, But Read the Fine Print - ...**

Apple has a staggering marketing claim for the new MacBook Air with the M4 chip. Specifically, Apple says the new MacBook Air is up to 23x faster...

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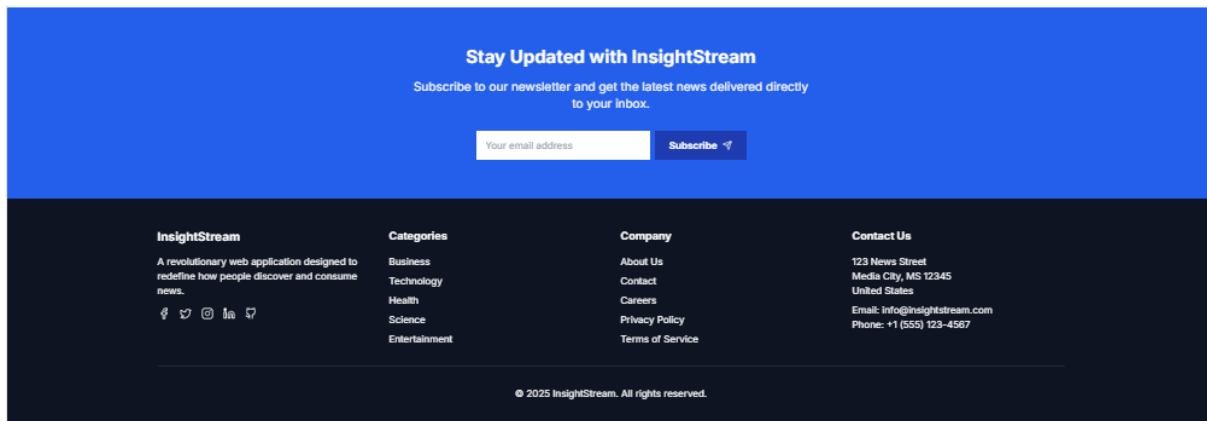
**No one asked for this: Google is testing round keys in Gboard - Ars Technica**

A lot of Gboard beta users are suddenly remembering they joined the beta.

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## 13. KNOWN ISSUES

- API Rate Limits – News API has a request limit per hour.
- Some Articles Missing Images – Some news sources don't provide images.

## 14. FUTURE ENHANCEMENTS

- User Authentication – Allow users to create accounts and save favorite articles.
- Push Notifications – Notify users of breaking news.
- Infinite Scroll – Implement seamless scrolling for more news.

## 15. CONCLUSION

InsightStream is a powerful news aggregator that provides users with real-time news, categorized browsing, and an intuitive search feature. Future updates will include user authentication, bookmarks, and personalized news feeds.