**Problem Definition**

In today's fast-paced world, staying informed about current events and relevant news is more crucial than ever. However, amidst the overwhelming abundance of information available, individuals often struggle to find a reliable, concise, and tailored news source that aligns with their interests and preferences.

Traditional news outlets bombard users with a flood of articles, leading to information overload and decision fatigue. Moreover, the rise of clickbait headlines and sensationalized content further diminishes the quality of news consumption, making it challenging for users to distinguish between credible information and misinformation.

**DailyInsight** aims to revolutionize the way users consume news by offering a personalized, concise, and insightful news feed tailored to individual preferences and interests.

Desired Outcome: DailyInsight empowers users to:

* Stay informed about the most important news of the day without wasting time on irrelevant information.
* Gain a deeper understanding of current events and their impact.
* Make informed decisions based on accurate and insightful analysis.
* Feel empowered and engaged with the world around them.

**Scope**

1. **Functional Requirements :**
   * 1. **User Authentication:**

* Users should be able to create accounts and log in securely.
* Provide options for password recovery and account management.
  + 1. **Personalized User Profile:**
* Allow users to customize their profiles, including preferences for news categories or topics of interest.
  + 1. **News Feed:**
* Display a concise and user-friendly news feed on the app's home screen.
* Present headlines, images, and brief summaries of news articles.
* Allow users to scroll through the news feed easily.
  + 1. **Categorized News Sections:**
  + Organize news articles into categories such as World News, Business, Technology, Entertainment, Sports, etc.
  + Enable users to navigate easily between different sections.
    1. **Search Functionality:**
* Implement a search feature for users to find specific news articles or topics quickly.
  + 1. **Filter and Sorting Options:**
* Provide users with options to filter news articles based on relevance, popularity, or publication date.
  + 1. **Bookmarking:**
* Enable users to bookmark or save articles for later reading.
* Implement a "Read Later" section where users can access their saved articles.
  + 1. **Sharing Options:**
* Allow users to share interesting articles through social media, email, or messaging platforms.
  + 1. **Offline Reading:**
* Provide an offline mode, allowing users to access previously downloaded articles without an internet connection.
  + 1. **Push Notifications:**
* Implement push notifications to alert users about breaking news or important updates.
  + 1. **Settings and Preferences:**
* Include a settings section where users can customize app preferences, such as font size, theme, and notification preferences.
  + 1. **Feedback and Reporting:**
* Allow users to provide feedback on articles or report issues with content.
* Implement a mechanism for users to report bugs or suggest improvements.

1. **Non-Functional Requirements :**
2. **Performance:** News articles should load quickly, and the app should respond promptly to user interactions such as scrolling, searching, and filtering articles.
3. **Reliability:** News articles should be reliably fetched from sources and displayed to users without errors or delays..
4. **Availability:** The app should be available for use at all times, with minimal downtime for maintenance or updates.
5. **Security:** The app should implement secure authentication mechanisms to prevent unauthorized access to user accounts and personal information.
6. **Usability:** The app should have an intuitive user interface that makes it easy for users to browse, read, and share news articles. Navigation should be simple and straightforward, with clear categories, search functionality, and customizable preferences.
7. **Accessibility:** The app should be accessible to users with disabilities, following accessibility standards such as screen reader support, keyboard navigation, and adjustable text sizes.
8. **Compatibility:** The app should be compatible with a wide range of devices and operating systems, including smartphones, tablets, and web browsers
9. **Maintainability:** The app should be easy to maintain and update, with well-organized code and documentation.
10. **Portability:** Users should be able to access their news preferences and saved articles across multiple devices seamlessly.

**Technologies to be used**

* **Flutter Framework:** Flutter provides a rich set of widgets and tools for building beautiful and responsive user interfaces across iOS, Android, and web platforms.
* **Dart Programming Language:** Dart is the programming language used with Flutter. It's a statically typed language with modern features like async/await for handling asynchronous operations.
* **Firebase:** Firebase can be used for backend services such as user authentication, cloud storage for storing news articles or user data, and Firestore for real-time database capabilities.
* **HTTP Client:** Flutter's built-in HTTP client or packages like Dio can be used for making HTTP requests to fetch news articles from external APIs or sources.
* **UI/UX Design Tools**: Tools Figma can be used for designing the app's user interface and creating mockups before implementation.
* **Flutter Packages:** Utilize Flutter packages from pub.dev for additional functionalities like displaying images, handling animations, parsing JSON data, implementing custom UI components, etc.
* **Testing Frameworks:** Flutter's built-in testing framework can be used for writing unit tests, widget tests, and integration tests to ensure the reliability and stability of the app.
* Analytics and Crash Reporting: Integrate Firebase Analytics and Crashlytics for monitoring user engagement, app performance, and detecting crashes.
* Authentication: Implement Firebase Authentication for user authentication features like email/password authentication, Google sign-in, etc.
* Push Notifications: Integrate Firebase Cloud Messaging (FCM) for sending push notifications to users about breaking news or important updates.
* Localization and Internationalization: Flutter provides built-in support for localization and internationalization, allowing the app to be translated into multiple languages for a global audience.