**Project Documentation**

**1. Introduction**

**Project Title: InsightStream – Navigate the News Landscape**

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**2. Project Overview**

**Purpose:**

InsightStream is a smart news aggregator that helps users explore, analyze, and stay updated with the latest news from diverse sources. It provides real-time updates, personalized feeds, and an interactive dashboard for deeper insights into trending topics.

**Features:**

* Aggregated news from multiple reliable sources
* Real-time updates with category filters (politics, sports, tech, etc.)
* Personalized recommendations based on user interests
* Search and keyword-based filtering
* Interactive dashboards with trending charts
* Save and bookmark articles for later
* Admin panel for content moderation

**3. Architecture**

* **Frontend:** React.js with Material UI / Tailwind CSS for modern responsive design
* **Backend:** Node.js with Express.js for server-side logic and API integration
* **Database:** MongoDB to store user profiles, preferences, bookmarks, and analytics
* **External APIs:** Integrated with trusted news APIs (e.g., NewsAPI, GNews) for live updates

**4. Setup Instructions**

**Prerequisites:**

* Node.js
* MongoDB
* Git
* React.js
* Express.js
* Visual Studio Code

**Installation Steps:**

# Clone the repository

git clone <repository-link>

# Install client dependencies

cd client

npm install

# Install server dependencies

cd ../server

npm install

**5. Folder Structure**

InsightStream/

|-- client/ # React frontend

| |-- components/

| |-- pages/

|

|-- server/ # Node.js backend

| |-- routes/

| |-- models/

| |-- controllers/

|

|-- database/ # MongoDB collections

**6. Running the Application**

**Frontend:**

* cd client
* npm start

**Backend:**

* cd server
* npm start

**Access:** Visit http://localhost:3000

**7. API Documentation**

**User:**

* POST /api/user/register
* POST /api/user/login

**News:**

* GET /api/news/latest
* GET /api/news/search?query=keyword
* GET /api/news/category/:type

**Bookmarks:**

* POST /api/bookmark/add
* GET /api/bookmark/list

**Admin:**

* POST /api/admin/add-source
* DELETE /api/admin/remove-source

**8. Authentication**

* JWT-based authentication for secure login
* Middleware-protected routes for user and admin features

**9. User Interface**

* Landing Page with top headlines
* Category-specific pages (Tech, Sports, Entertainment, etc.)
* Personalized Dashboard with recommendations
* Search and Filter News Page
* Bookmarks Section
* Admin Dashboard

**10. Testing**

**Methods:** Manual testing at development milestones

**Tools:** Postman, Chrome DevTools

**11. Screenshots or Demo**

(<https://drive.google.com/file/d/1c_WiE1-t451AfPJfA8br4vchADKavXV3/view?usp=drivesdk>)

**12. Known Issues**

* Some free APIs have request limits
* Regional news sources may vary in availability

**13. Future Enhancements**

* AI-based summarization of long articles
* Sentiment analysis on trending topics
* Voice-assisted news reading
* Mobile app for iOS and Android