NAAN MUDHALVAN PROJECT

INSIGHT STREAM: NAVIGATE THE NEWS LANDSCAPE

1 . Introduction

Project Title: Insight Stream:Navigate the News Landscape.

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Team Members:

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2. Project Overview

Purpose:
Insight Stream is a news aggregation and analysis platform designed to help users easily navigate the overwhelming digital news landscape. It collects news from trusted sources, categorizes content, provides summaries, and applies sentiment analysis to deliver insightful perspectives.

Features:
- Real-time news aggregation from multiple APIs
- Smart categorization (Politics, Sports, Tech, Health, etc.)
- AI-driven summarization for quick reading
- Sentiment analysis and trend visualization
- Personalized recommendation engine
- User dashboard with bookmarks and history

3. Architecture

- Backend: Node.js + Express.js (handles API requests, news data processing)

- Database: MongoDB (stores users, preferences, bookmarks, and aggregated news)

- External APIs: News API, Google News, or other RSS feeds for news sources

- AI/ML: Natural Language Processing (NLP) for summarization & sentiment analysis

4. Setup Instructions

Prerequisites:

- Node.js

- MongoDB

- Git

- React.js

- Express.js

- Visual Studio Code

Installation Steps:

Clone the repository

git clone <repo-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/category/:type
GET /api/news/trends
User Dashboard:
POST /api/bookmark
GET /api/bookmarks/:userId

8. Authentication

- JWT-based authentication for secure login

- Middleware protects private route

9. User Interface

- Landing Page

- News Dashboard (categories, trending, sentiment)

- Personalized Feed Page

- Bookmark Manager

- Admin Panel

10. Styling

CSSFrameworks/Libraries: Tailwind CSS for styling; Styled Components for scoped styles.

Theming:
Dark and light mode toggle implemented via context.
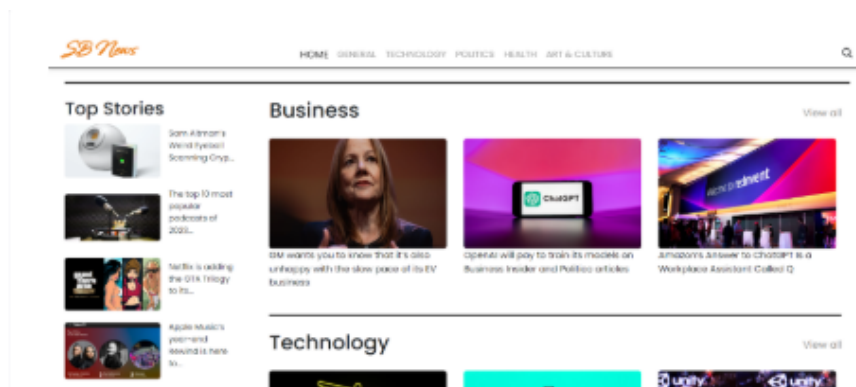
11. Testing

Manual Testing: During development milestones

Tools: Postman, Chrome Dev Tools, Jest (for frontend unit tests

12. Screenshots or Demo
Addactualscreenshotsorademo link: -
Demo Link: insightstreamkanieshkka.zip

12. Known Issues

- Limited free-tier access to news APIs

- Summarization accuracy may vary depending on content length

14. Future Enhancements

- Multilingual news summarization
- Voice-based search and accessibility features
- Advanced AI-based bias detection in news sources
- Mobile app version (React Native / Flutter)