INSIGHTSTREAM : NAVIGATE THE NEWS LANDSCAPE

(NEWS APP)

NAANMUDHALVAN PROJECT REPORT

SUBMITTED BY

TEAM LEADER

RESHMA D(212204548)   **danielreshma299@gmail.com**

TEAM MEMBERS

PAVITHRA K(212204543)   **pavitharap991@gmail.com**

NITHYASHREE K(212204542)   **shree2045np@gmail.com**

SANDHIYA V(212204550)   **sandy06022004@gmail.com**

NANDHINI D(212204539)   **nandhudhanasing@gmail.com**

DEPARTMENT OF COMPUTER APPLICATIONS

TAGORE COLLEGE OF ARTS AND SCIENCE

(Affiliated to the University of Madras)

CLC WORKS ROAD, CHROMPET,
CHENNAI – 600 044
MARCH - 2025

InsightStream: Navigate the News Landscape
Ideation Phase
Brainstorm & Idea Prioritization

Date	05 March 2025
Team ID	SWTID1741232591152740
Project Name	Insight Stream: Navigate the News Landscape
Maximum Marks	4 Marks

Team Leader	RESHMA D
Team Member 1	SANDHIYA V
Team Member 2	NANDHINI D
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Team Member 4	NITHYASHREE K

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference: https://www.mural.co/templates/brainstorm-and-idea-prioritization

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

Write down any ideas that come to mind
that address your problem statement.

🕐 10 minutes

TIP

You can select a sticky note
and hit the pencil [switch to
sketch] icon to start drawing!

Person 1	Person 2	Person 3	Person 4
Use user preferences (topics, keywords) to display relevant news articles.	Integrate an API that fetches breaking news updates continuously.	Allow users to search news articles based on categories (e.g., Tech, Business, Sports).	Enable users to save their favorite articles for later reading.

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all
sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is
bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

🕐 20 minutes

TIP

Add customizable tags to sticky
notes to make it easier to find,
browse, organize, and
categorize important ideas as
themes within your mural.

Personalized News & Preferences	Content Organization & Search	Real-Time Updates

Step-3: Idea Prioritization

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⏱ 20 minutes

Importance

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

Feasibility

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)

Real-Time Updates

Personalized News Feed

Bookmark & Save

Search & Filters
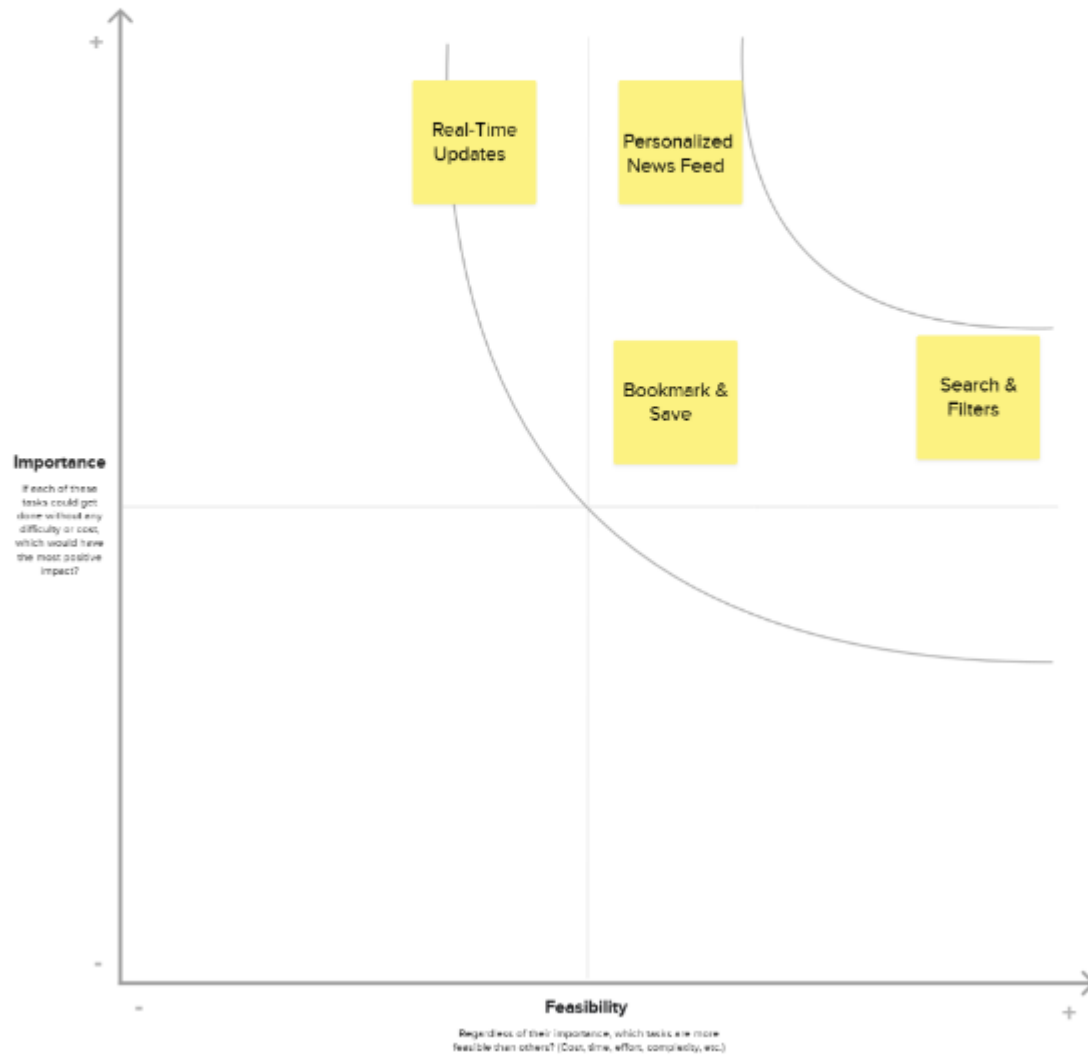
InsightStream: Navigate the News Landscape
Ideation Phase
Define the Problem Statements

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Customer Problem Statement Template:

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.

A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.

Reference: https://miro.com/templates/customer-problem-statement/

Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	A busy professional	Stay updated with the latest news quickly	Most news websites are cluttered with ads and unnecessary content	I need a clean, distraction-free interface with only relevant news	Frustrated and unwilling to browse for long
PS-2	A casual reader	Find news on topics I care about	The news feed is not personalized	I want an easy way to filter news based on my interests	Disconnected and overwhelmed by irrelevant content
PS-3	A mobile user	Read news on the go	Many platforms are not mobile-friendly or take too long to load	I need a smooth, fast-loading, and responsive experience	Annoyed and likely to leave the platform
PS-4	A user concerned about credibility	Get reliable news from trusted sources	A lot of platforms spread misinformation or lack source transparency	I need verified news from reputable sources	Skeptical and unsure which news to trust

InsightStream: Navigate the News Landscape
Ideation Phase

Empathize & Discover

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Empathy Map Canvas:
An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes.

It is a useful tool to helps teams better understand their users.
Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.
Example:

Reference: https://www.mural.co/templates/empathy-map-canvas

Says
What have we heard them say?
What can we imagine them saying?

I just need quick updates.

Thinks
What are their wants, needs, hopes, and dreams?
What other thoughts might influence their behavior?

I don't have time for long articles.

Shivani Kapoor
Busy Professional

Does
What behavior have we observed?
What can we imagine them doing?

Skims headlines, avoids cluttered news apps.

Feels
What are their fears, frustrations, and anxieties?
What other feelings might influence their behavior?

Frustrated by irrelevant news.

See an example

Project Design Phase-II

Data Flow Diagram & User Stories

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Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Example:
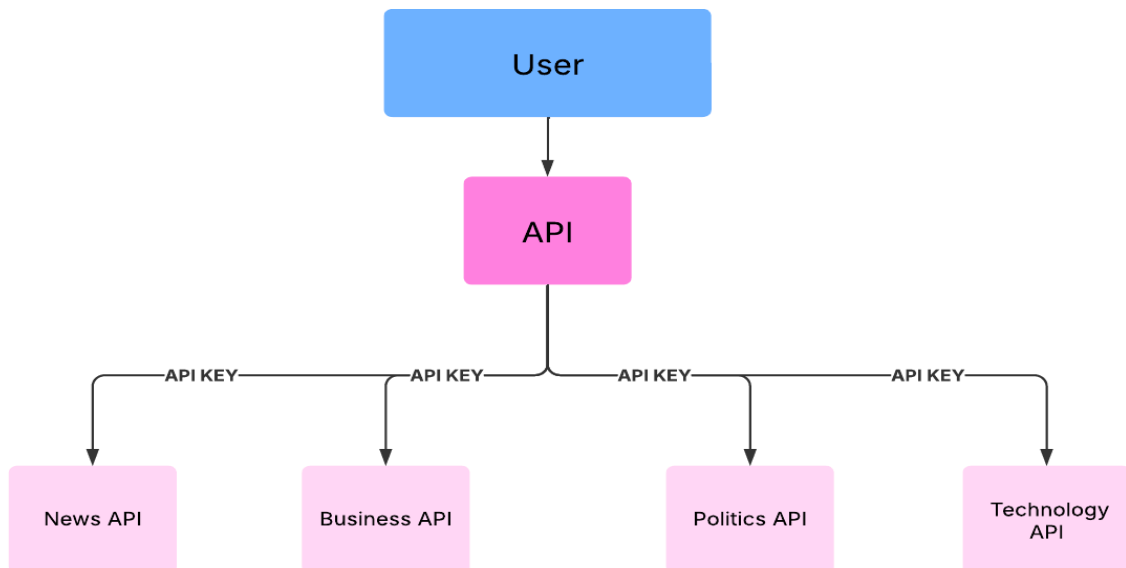
User Stories

User Story Table – Music Streaming App

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
News		USN-1	As a user, I can see the trendy news .	I can see the News of all topics.	High	Sprint -1
Genre		USN-2	As a user, I can watch Political,Business, and Technology News.	I can also go the source and read the full news.	High	Sprint -1
		USN-3	As a user, I can able to view the complete news across the world.	I can also watch the news for multiple pages .	Medium	Sprint -2
Subscription		USN-4	As a user, I can even subscribe.	I can Subscribe to the newsletter for the news .	High	Sprint -2

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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Functional Requirements:

Following are the functional requirements of the proposed solution.

Functional Requirements – News App

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	News Home	Top News
FR-2	News Genre	General,Health,Technology,Politics,Art & Culture
FR-3	NewsLetter	NewsLetter subscription

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

| NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	The app should have an intuitive and user-friendly interface, ensuring smooth navigation and accessibility for users of all demographics.
NFR-2	Security	User authentication and data must be secured using encryption (e.g., HTTPS, OAuth for third-party logins). The app should prevent unauthorized access and follow best security practices.
NFR-3	Reliability	The app should ensure a consistent and uninterrupted music streaming experience, minimizing crashes and downtime.
NFR-4	Performance	Songs should load and stream with minimal buffering. The app should respond to user interactions (search, playback, playlist management) within 2 seconds.

NFR-5	Availability	The system should maintain an uptime of at least 99.9%, ensuring accessibility across different time zones.
NFR-6	Scalability	The app should handle increasing numbers of users and concurrent streams efficiently without performance degradation. The architecture should support future feature expansion.

Project Design Phase-II
Technology Stack (Architecture & Stack)

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Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: News App

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based interface for News	HTML, CSS, JavaScript / React Js etc.
2.	Application Logic-1	News fetching from News api	React js
3.	Application Logic-2	News fetching based on genre	React js

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
4.	Open-Source Frameworks	Frontend frameworks	React.js, BootStrap, Tailwind CSS

References:

React.js Documentation

Project Planning Phase
Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

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Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint -1	News Categories	USN-1	As a user, I can read the news based on the category.	20	High	Tousif
Sprint -2	Default News	USN-2	As a user, I can see the trendy news at the default page .	20	High	Tousif
Sprint -3	News Browsing	USN-3	As a user, I can read the complete article with courtesy.	20	High	Tousif
Sprint -4	Subscription	USN-4	As a user, I can Subscribe to the news letter.	20	High	Tousif

Project Tracker, Velocity & Burndown Chart

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	1 Mar 2025	2 Mar 2025	20	2 Mar 2025
Sprint-2	20	6 Days	3 Mar 2025	4 Mar 2025	20	4 Mar 2025
Sprint-3	20	6 Days	5 Mar 2025	6 Mar 2025	20	6 Mar 2025
Sprint-4	20	6 Days	7 Mar 2025	8 Apr 2025	20	8 Apr 2025

Project Design Phase
Problem – Solution Fit Template

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Problem – Solution Fit Overview:

The **Problem-Solution Fit** ensures that the identified problem aligns with the needs of News App and that the proposed solution effectively addresses it. This validation is crucial before further development.

Purpose:

- Address the fragmented News, where users struggle to find a comprehensive platform that caters to diverse news tastes and offers personalized recommendations.
- Provide an intuitive and engaging platform for users to discover latest news ,courtesy without relying on multiple sources.
- Offer News based on category to enhance user engagement and satisfaction.
- Provide a platform that empowers independent journalists to gain exposure.
- Improve accessibility and engagement through an **interactive UI, responsive design, and well-structured data flow**.

Problem Statement:

Many music enthusiasts face challenges in finding a single platform that offers:

- A vast and diverse news platform.
- Accurate and top news .
- Genuine courtesy.
- A strong social community around news .
- Fair exposure for independent journalist.

Solution:

"News App", a News app for web and mobile application, will provide:

- An extensive top News library through partnerships with major and independent record labels.
- Top and trendy news by default .
- Genuine courtesy reduces the chance of corrupted news.
- A freemium business model, that allows for free users.

Project Design Phase
Proposed Solution Template

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Proposed Solution for Music Streaming App

S. No.	Parameter	Description
1	**Problem Statement** (Problem to be solved)	Users often struggle to find accurate news and genuine courtesy. News app provides a full fledged top news and the news based on the genre .The open source third party news api provides the service for fetch and news and the news based on the category.
2	**Idea / Solution Description**	The News app is a React-based frontend solution that allows users to search, stream, and manage the news. It leverages a third-party API to fetch news and ensures an intuitive and interactive UI/UX for a seamless experience.
3	**Novelty / Uniqueness**	- **Top news** using open source third party API - **Intuitive UI/UX** with responsive design across devices - **Cross-Platform Support** for both mobile and web users - **Seamless Integration** with third-party News APIs for vast content availability
4	**Social Impact / Customer Satisfaction**	- Provides an **ad-free news experience** with multiple categories- **Brings emerging courtesy** to a wider audience through latest news - **Increases user engagement** through category based news.
5	**Business Model (Revenue Model)**	- **Freemium Model**: Free tier with No ads,for enjoying ad free news and news based categories.
6	**Scalability of the Solution**	- Can be **expanded globally** by integrating multiple third-party news APIs - Supports for enhanced personalization - Can be extended to **mobile applications** for iOS & Android using React Native - Potential integration with **AI-driven recommendation engines** for improved user experience

Project Design Phase
Solution Architecture

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Solution Architecture:

The solution architecture for news app, the news Application, ensures a **scalable, high-performance, and immersive platform** for getting news from genuine sources and personalized playlists. The architecture prioritizes seamless audio delivery, real-time recommendations, and cross-device synchronization to enhance user engagement.

- Find the best tech solution to solve existing business problems.

- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.

- Define features, development phases, and solution requirements.

- Provide specifications according to which the solution is defined, managed, and delivered.

Example - Solution Architecture Diagram:
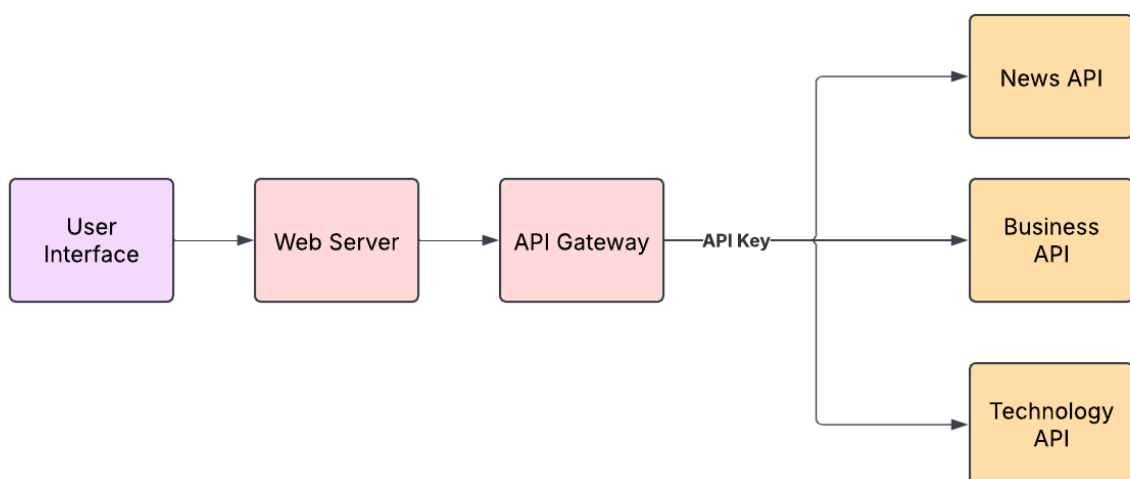
User Acceptance Testing (UAT) Template

Date	05 March 2025
Team ID	SWTID1741231870151721
Project Name	Insight Stream: Navigate the News Landscape
Maximum Marks	4 Marks

Team Leader	HARISH NARAYANAN S
Team Member 1	HARISH RAJ V
Team Member 2	JAI GANESH S
Team Member 3	JOHN CHRISTOPHER D
Team Member 4	KESAVAN J

Project Overview

☐ **Project Name:** News app

☐ **Project Description:** A React-based news application that allows users to search, track, and analyse real-time news data using a third-party API.

☐ **Project Version:** v1.0
☐ **Testing Period:** March 1, 2025 - March 8, 2025

Testing Scope

Features and Functionalities to be Tested

✓Home Page & Navigation

✓News Category

✓API Integration for Real-Time news

✓API key to access the api

✓Watching News based on category.

✓UI/UX Testing (Responsiveness, Icons, Styling)

✓Error Handling & Performance Testing

User Stories or Requirements to be Tested

☐ Viewing global news.
☐ Watching news based on the category
☐ Getting newsletter based on subscription
☐ Responsive UI across Mobile, Tablet, and Desktop
☐ Handling API Errors Gracefully

Test Cases

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC-001	Load Homepage	1. Open the application 2. Homepage loads	Homepage should display all the news.	[Actual Result]	[Pass/Fail]
TC-002	Category	1. Select the news category	Get the news based in the category	[Actual Result]	[Pass/Fail]
TC-003	Subscription	1. Get the newsletter	Get the subscription newsletter.	[Actual Result]	[Pass/Fail]
TC-004	Mobile Responsiveness	1. Open the app on a mobile device 2. Navigate	UI should be responsive and	[Actual Result]	[Pass/Fail]

		through pages	properly displayed		

Bug Tracking

Bug ID	Bug Description	Steps to Reproduce	Severity	Status	Additional Feedback
BG-001	results take too long to load	1. Results won't load. 2. Observe slow response time	High	Open	Need API Key
BG-002	News will not load.	1. Click on category 2. Observe incorrect results	Medium	In Progress	Filtering logic needs debugging
BG-003	UI overlaps on small screen devices	1. Open app on small devices (iPhone SE) 2. Observe UI distortion	Low	Open	Adjust CSS for better responsiveness

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Sign-off

Tester Name: [Enter Name]
Date: [Enter Date of Completion]
Signature: [Enter Signature]

Notes

- Ensure testing covers both positive & negative cases

- Bug tracking should include severity levels & reproduction steps

- Final sign-off required before deployment