

NEWS FEED APP

A PROJECT REPORT

Submitted by

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in partial fulfillment of requirements for the award of the course

AGB1211 – DESIGN THINKING

in

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY

(An Autonomous Institution, affiliated to Anna University Chennai and Approved by
AICTE, New Delhi)

SAMAYAPURAM – 621 112

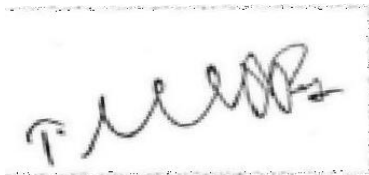
DECEMBER 2024

K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY (AUTONOMOUS)

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BONAFIDE CERTIFICATE

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who carried out the project work during the academic year 2024 - 2025 under my
supervision.



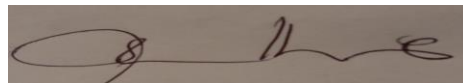
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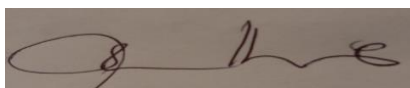
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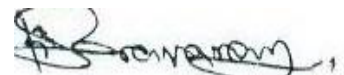
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Submitted for the viva-voce examination held on 5.12.24



INTERNAL EXAMINER

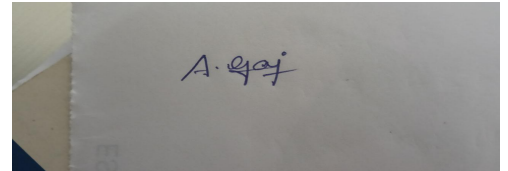


EXTERNAL EXAMINER

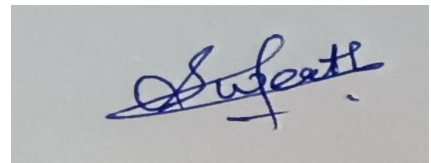
DECLARATION

I declare that the project report on “**NEWS FEED APP**” is the result of original work done by us and best of our knowledge, similar work has not been submitted to “**ANNA UNIVERSITY CHENNAI**” for the requirement of Degree of **BACHELOR OF TECHNOLOGY**. This project report is submitted on the partial fulfillment of the requirement of the award of the **AGB1211 – DESIGN THINKING**.

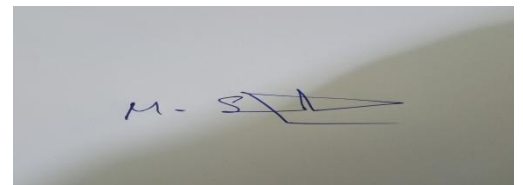
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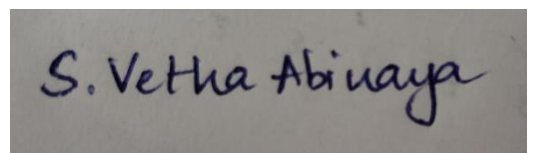
GAYATHRI.A

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SWEATHA . A

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SRILEKHA .M

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VETHAABINAYA. S

Place: Samayapuram

Date: 5/12/2024

ACKNOWLEDGEMENT

It is with great pride that I express our gratitude and indebtedness to our institution, **“K. Ramakrishnan College of Technology (Autonomous)”**, for providing us with the opportunity to do this project.

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I render our sincere thanks to the Course Coordinator and other staff members for providing valuable information during the course.

I wish to express our special thanks to the officials and Lab Technicians of our departments who rendered their help during the period of the work progress.

VISION OF THE INSTITUTION

To serve the society by offering top-notch technical education on par with global standards.

MISSION OF THE INSTITUTION

- Be a center of excellence for technical education in emerging technologies by exceeding the needs of industry and society.
- Be an institute with world class research facilities.
- Be an institute nurturing talent and enhancing competency of students to transform them as all- round personalities respecting moral and ethical values.

VISION AND MISSION OF THE DEPARTMENT

To become a renowned hub for AIML technologies to producing highly talented globally recognizable technocrats to meet industrial needs and societal expectation.

Mission 1: To impart advanced education in AI and Machine Learning, built upon a foundation in Computer Science and Engineering.

Mission 2: To foster experiential learning equips students with engineering skills to tackle real-world problems.

Mission 3: To promote collaborative innovation in AI, machine learning, and related research and development with industries.

Mission 4: To provide an enjoyable environment for pursuing excellence while upholding strong personal and professional values and ethics.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO 1: Excel in technical abilities to build intelligent systems in the fields of AI & ML in order to find new opportunities.

PEO 2: Embrace new technology to solve real-world problems, whether alone or as a team, while prioritizing ethics and societal benefits.

PEO 3: Accept lifelong learning to expand future opportunities in research and product development.

PROGRAM OUTCOMES

Engineering students will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1: Expertise in tailoring ML algorithms and models to excel in designated applications and fields.

PSO 2: Ability to conduct research, contributing to machine learning advancements and innovations that tackle emerging societal challenges.

ABSTRACT

The News Feed App is a mobile application designed to provide users with real-time, personalized news updates from various sources. By leveraging advanced algorithms and machine learning techniques, the app curates content tailored to the user's preferences, interests, and browsing history. The user interface (UI) is simple, intuitive, and engaging, featuring a scrolling feed with articles, videos, and interactive elements. The app allows users to filter news based on categories such as politics, entertainment, technology, and sports, and also offers notifications for breaking news. With built-in social media sharing options and comment features, the app promotes user interaction and content engagement. The app prioritizes data privacy and ensures secure handling of user information. This app provides a dynamic and customizable news experience for users seeking relevant and up-to-date information.

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CHAPTER 1

INTRODUCTION

1.2 INTRODUCTION

A news feed app is a mobile or web application designed to deliver real-time news updates and content from various sources directly to users. With the increasing reliance on digital media for information, users demand a personalized and accessible way to stay informed. The News Feed App aggregates articles, videos, and social media posts based on user interests, offering a streamlined and interactive interface. It uses machine learning algorithms to customize content and allows users to interact with the news by liking, sharing, or commenting. This app aims to enhance the user experience by providing curated content that aligns with individual preferences, ensuring users are always up to date with the latest news and trends.

1.2 PROBLEM STATEMENT

In the age of information overload, users are bombarded with vast amounts of data and news from multiple sources, making it challenging to filter relevant, accurate, and personalized content. Many existing news platforms present overwhelming amounts of generic or irrelevant news, failing to adapt to individual user needs. Furthermore, accessing news through traditional media is often slow, fragmented, or not accessible in real-time. This creates a gap for an efficient, user-centric solution that consolidates news sources and delivers timely, tailored information in a user-friendly format. The problem is compounded by concerns about user privacy and data security when utilizing digital news platforms.

1.3 OBJECTIVE

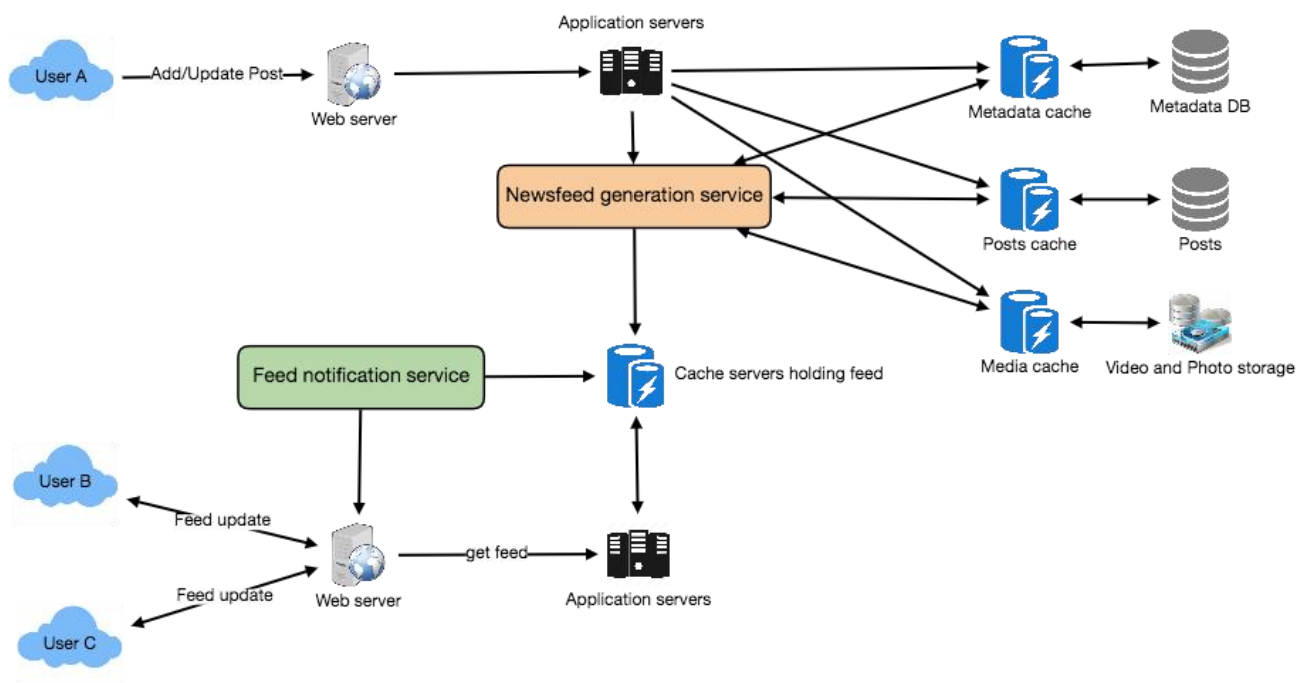
The primary objective of the News Feed App is to create a seamless and personalized news consumption experience for users. The key objectives of the app include:

1. **Personalization:** To develop a dynamic news feed that curates content based on user preferences, including topics of interest, past interactions, and browsing habits.
2. **Real-Time Updates:** To deliver timely news from multiple sources, including breaking news, articles, videos, and social media content.
3. **User Engagement:** To allow users to interact with the content through liking, commenting, and sharing, fostering an interactive and engaging platform.
4. **Privacy and Security:** To ensure secure handling of user data and respect for privacy while providing personalized content.
5. **Cross-Platform Accessibility:** To provide users with easy access to the app across different devices and platforms, ensuring they stay informed anytime, anywhere.

CHAPTER 2

PROJECT METHODOLOGY

2.1 BLOCK DIAGRAM



CHAPTER 3

KEY PHASES OF DESIGN THINKING

3.1 Empathize

Objective: Understand the users' needs, behaviors, and pain points by observing and engaging with them.

Application to News Feed App:

- **User Research:** Conduct interviews, surveys, and usability studies to understand how users consume news, their preferences, and the challenges they face with current news platforms (e.g., information overload, irrelevant content).
- **Empathy Mapping:** Create user personas based on demographic data, interests, and goals, such as users who prefer in-depth articles, quick news updates, or visual media (videos and infographics).
- **Observational Studies:** Observe how users interact with other news apps and websites to identify common frustrations and needs.

3.2 Define

Objective: Clearly define the problem based on the insights gained during the "Empathize" phase.

Application to News Feed App:

- **Problem Statement:** "Users are overwhelmed by irrelevant, generic news and often miss out on content tailored to their interests. They need an efficient way to access personalized, relevant, and real-time news content."
- **User Needs:** Personalized content, timely news updates, easy-to-navigate interface, control over what they see (categories, topics, sources).

- **Pain Points:** Information overload, privacy concerns, slow or outdated news feeds, lack of engagement with the content.

3.3 Ideate

Objective: Generate a wide range of creative ideas and solutions to address the defined problem.

Application to News Feed App:

- **Brainstorming Features:** Think about innovative features like advanced content personalization, real-time updates, interactive elements (polls, comments, sharing), and a clean, minimalistic UI.
- **Wireframing:** Sketch multiple app screen layouts and wireframes that reflect the user's needs (e.g., a personalized news feed, topic-based categorization, notification settings).
- **Idea Prioritization:** Evaluate ideas based on feasibility, user needs, and potential impact. Focus on features that directly solve user pain points (like personalized content filters or recommendation algorithms).

3.4 Prototype

Objective: Develop low-fidelity prototypes to bring the ideas to life and test them in the real world.

Application to News Feed App:

- **App Mockups:** Create a basic prototype of the app, including key screens like the news feed, article details, user profile settings, and customization options.
- **Interactive Prototype:** Develop an interactive, clickable version of the app that allows for basic navigation and simulates user interactions (scrolling through the news feed, liking posts, commenting, and sharing).
- **Iterative Prototyping:** Develop different versions of the prototype based on feedback and continually refine the design.

3.5 Test

Objective: Test the prototype with real users to gather feedback and identify areas for improvement.

Application to News Feed App:

- **User Testing:** Conduct usability testing by having users interact with the prototype to observe how they navigate the app, whether they find the news feed relevant, and how well the app meets their needs.
- **Feedback Collection:** Use surveys, focus groups, and analytics to gather feedback on how users experience the app, including its interface, ease of use, and personalization accuracy.
- **Iterative Refinement:** Based on feedback, make necessary design changes. For instance, if users find certain features confusing or unnecessary, refine the user interface or simplify navigation.

CHAPTER4

MODULE DESCRIPTION

4.1Module 1 User Profile Module

This module is responsible for managing user information, preferences, and personalization settings.

Key Functions:

- **User Registration and Login:** Allows users to sign up or log in using their email, social media accounts, or other credentials.
- **Profile Management:** Stores and updates user preferences, such as favorite news categories (e.g., politics, sports, technology) and sources (e.g., specific news outlets).
- **History and Behavior Tracking:** Tracks users' browsing history, articles read, interactions (likes, comments), and search queries to personalize the news feed.
- **Notifications Settings:** Allows users to configure notification preferences, such as breaking news alerts or daily summaries.

4.2Module 2 News Feed Module

This is the core module that delivers the actual news content to the user, tailored to their preferences.

Key Functions:

- **Content Aggregation:** Collects news articles, videos, and other media from a variety of sources, including news websites, social media, RSS feeds, and APIs.
- **Personalized News Feed:** Uses data from the user profile and machine learning algorithms to present content that matches the user's interests and behavior.
- **Real-Time Updates:** Ensures that the news feed is updated in real time or at regular intervals to show the latest content.

4.3 Module 3 Search and Discovery Module

This module allows users to search for specific topics or explore new and trending content.

Key Functions:

- **Search Functionality:** Provides users with a search bar to find articles, topics, or keywords they are interested in (e.g., "tech news," "sports updates").
- **Trending Topics:** Displays a list of popular or trending topics that users can explore. This could be driven by user activity or trending news globally or locally.
- **Advanced Filters:** Allows users to filter news by specific categories, dates, locations, or other criteria, helping them find the most relevant content.
- **Suggestions:** Based on user behavior, the app suggests topics or articles that the user might like, helping them discover new content.

4.4 Module 4 Content Interaction Module

This module enables users to engage with the content and interact with other users.

Key Functions:

- **Social Sharing:** Allows users to share articles and videos via social media, messaging apps, or email.
- **Likes, Comments, and Reactions:** Users can like, comment, or react to content (e.g., thumbs up, heart, etc.), which can help personalize the content further by tracking user engagement.
- **Bookmarking:** Users can save articles to read later or create a reading list within the app.

4.5 Module 5 Backend and Data Management Module

This module manages all the server-side operations, content storage, user data, and system performance.

Key Functions:

- **Database Management:** Stores user data, content (articles, videos, images), user preferences, and other app-related information in a secure database.
- **Content Delivery Network (CDN):** Uses a CDN to ensure quick and efficient delivery of media content (images, videos, etc.) to users, regardless of their location.
- **APIs for Content Aggregation:** Integrates with various news APIs to fetch real-time data from news providers and other sources.
- **Security and Privacy:** Ensures that user data is secure and that privacy policies are followed. Implements encryption, access control, and regular audits.
- **Analytics and Reporting:** Tracks user behavior, interactions, and content performance to optimize the news feed and app features. Provides insights for continuous improvement.

CHAPTER 5

CONCLUSION

In conclusion, the **News Feed App** represents a powerful and dynamic solution to meet the evolving needs of users who seek real-time, personalized, and engaging news content. By leveraging advanced technologies such as machine learning algorithms for content personalization and real-time data aggregation from multiple sources, the app offers an intuitive and streamlined experience for users.

The five core modules—**User Profile**, **News Feed**, **Search and Discovery**, **Content Interaction**, and **Backend and Data Management**—work cohesively to ensure a smooth and efficient user experience. These modules not only allow for seamless content delivery, but also enable interaction, customization, and engagement, making the app more than just a news aggregator but a platform for users to connect with relevant information and ideas.

The app's ability to personalize content based on user preferences, historical interactions, and real-time events empowers users to stay informed without feeling overwhelmed by irrelevant information. Furthermore, the app's interactive features, such as commenting, sharing, and bookmarking, create a sense of community and involvement, transforming passive news consumption into an active and engaging experience.

As digital news consumption continues to grow, a well-designed News Feed App will play an integral role in shaping how users engage with news, providing them with relevant and timely information in a user-friendly environment. The future success of such an app will depend on continuous innovation, attention to user privacy, and responsiveness to emerging trends in news delivery and consumption.

By combining a rich user interface with robust back-end functionality, the News Feed App offers a comprehensive solution for today's information-driven society, helping users stay informed and engaged with the world around them.

REFERENCES:

1. YouTube Channels:


- AJ&Smart: Design sprints and UX tips.
- Link : https://www.youtube.com/AJ&Smart?sub_confirmation=1

2. NPTEL's Design Thinking Course

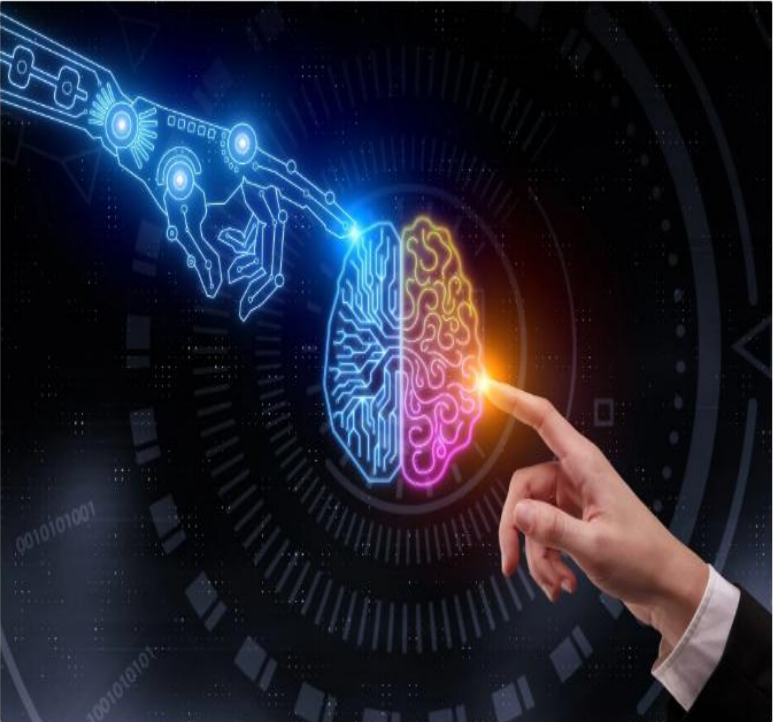
- Existing News Feed Apps for Inspiration
- Google News: Personalized and adaptive content.
- Link : <https://news.google.com/home?hl=en-IN&gl=IN&ceid=IN:en>
- Apple News: Clean and minimalistic interface.
- Flipboard: Magazine-style content arrangement.
- Feedly: Efficient for managing multiple feeds.
- Link : https://onlinecourses.nptel.ac.in/noc22_mg32/preview

APPENDIX A – SCREENSHOTS


Today's News Headlines



Breaking: Major Event Shocks the World



Technology: New AI Tool Changes the Game



Environment: Significant Climate Agreement Reached

