IBM NEWS TRACKER APPPLICATION
USING CLOUD TECHNOLOGY

Team ID: PNT2022TMID12589

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ABSTRACT

Everyone should have the freedom to express their thoughts and opinions. However, some people are misusing this right by using language that targets and attacks others, either physically or verbally, under the guise of free speech. This kind of discrimination is commonly referred to as hate speech. Hate speech can be defined as the use of language that expresses hatred towards individuals or groups based on factors like race, religion, ethnicity, gender, nationality, disability or sexual orientation. The widespread use of social media and information sharing has brought significant benefits to society. However, it has also led to various challenges including the dissemination and propagation of hate speech messages. To address this emerging issue on social media platforms, recent studies have employed different machine learning and deep learning algorithms along with text mining techniques to automatically detect hate speech messages in real time datasets. Therefore, the objective of this project is to analyze comments on social networks using Natural Language Processing (NLP) techniques and a Deep Learning algorithm called Backpropagation Neural Network algorithm. By utilizing NLP techniques, we can extract keywords from user generated content and implement the Backpropagation Neural Network algorithm for text classification purposes – determining whether a given text is positive or negative.

If there are any negative indications, the comments will be automatically blocked according to the user's preference. Additionally, friends will be blocked based on predetermined threshold values. The experimental findings demonstrate that the suggested framework has been successfully applied to a real time social networking site, resulting in enhanced notification capabilities.

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News Tracker Application

1. INTRODUCTION

The way people consume news is changing due to mobile app ecosystems. In the past, reading news on smartphones was limited to when people were on the move. However, now, two out of three mobile device users in the US regularly access news and as many as one in five read detailed news articles every day. The UK shows a similar trend. This increase in mobile news access reflects the ongoing shift of news consumers to the internet.

1.1 Project overview

With the increasing reliance on smartphones and tablets for accessing news, it becomes evident that personalizing news app interactions is crucial. In this study, we conducted three separate research studies to address key concerns in developing adaptive interfaces for news apps. We initially surveyed users to understand their preferences and behaviors when reading the news. Our analysis revealed three primary types of readers. Subsequently, we created and launched an Android news app that tracks users interactions within the app. Using this data, we trained a classifier that accurately identifies users based on their reader type. Lastly, we assessed different adaptive user interfaces tailored to each reader type. The evaluation showcased how the adaptation benefits users differently based on their engagement with the news app and highlights the practicality of implementing adaptive interfaces in such applications.

1.2 Purpose

In today's fast paced world, it often seems like we never have enough hours in a day to handle everything on our schedules. While it's impossible to actually extend the day, we can explore alternative approaches to reading news that might save us time. Simply let us know which market news topics interest us and we'll provide a quick overview for the day. We can choose to read only what we find relevant, allowing us to make the most of our time. The app enables us to access information on various indices, commodities, currencies, future rates, bonds and more directly from official websites.

2. LITERATURE SURVEY 2.1 Existing problem

We often feel we need more than 24 hrs. a day to cope up with everything we have in our schedule. Well, that's not possible but reducing the time by changing the conventional method of reading news can help.

2.2 References

Like articles, websites, blogs.

**https://www.researchgate.ne
t/.**

https://techvidvan.com/tutorials/android-news-app-project-source-code/

https://www.ripublication.com/

2.3 Problem Statement Definition

1. The user needs a way to organize the news on daily basis so that he can cope up with daily events in his tight schedule.

2. The user wants to read news only about particular topics so that he can be informed about his interest.

3. The user wants to get informed from only certified news outlets.

4. The user needs a way to search about the news on topics he wants to.

5. The user wants to know the news about his surrounding using GPS location.

3. IDEATION & PROPOSED SOLUTION 3.1 Empathy Map Canvas

What do they THINK AND FEEL?
what really counts
major preoccupations
worries & aspirations

- ads are irritating
- articles from various sources
- needs filters to filter out news
- overwhelmed
- inadequate
- anxious
- excited

What do they HEAR?
what friends say
what boss say
what influencers say

- good comment on clear and correct news
- good comment on clear and correct news
- review given by friends

What do they SEE?
environment
friends
what the market offers

- a news application with nice interface
- news app to follow up on the news
- crisp and clear news

What do they SAY AND DO?
attitude in public
appearance
behavior towards others

- where to begin from
- need news in an orderly manner
- nobody is crisp and clear
- likes the news
- discuss with family members
- expresses his opinions on news
- follows up on news

PAIN
fears
frustrations
obstacles

- must use this particular application
- must have internet and account

GAIN
"wants" / needs
measures of success
obstacles

- can follow up on the news easily
- remote access to all news from the world

3.2 Ideation & Brainstorming

Yogesh
- news in the form of tabs that has option to be followed
- incase of follow up in a news auto start up of application
- history of similar cases ans solutions
- remarks on the incident/event added

Akhil
- live statistics and information on flus
- polls on peoples opinions some government schemes
- recurring feedback on the ads provided
- animated headings for the news

Srinath
- links to the source of the news at the end
- intimation on violence and other vulger incidents
- creating an account to allow you to see the whole article
- news in the form bullet points giving

Navaneeth
- opinions on sports
- trending news from that region
- swipe right to follow
- only pictures are shown of the incident onclick news is shown

3.3 Proposed Solution

PROJECT DESIGN
PROPOSED SOLUTION

Date	30 September 2022
Project Name	News Tracker Application
Maximum Marks	4 Marks
Project Batch	PNT2022TMID12589

S.No:	Parameter	Description
1.	PROBLEM STATEMENT	As our lives are very busy these days, we often feel we need more than 24 hrs. a day to cope up with everything we have in our schedule. Well, that's not possible but reducing the time by changing the conventional method of reading news can help. Just tell us what market news you're interested in and get a quick peek for the day. Only read what you feel is relevant and save your time. This app helps you to query for all information about Indices, Commodities, Currencies, Future Rates, Bonds, etc.... as on official websites.
2.	IDEA / SOLUTION DESCRIPTION	There is no complete and easy solution to keep track of news as it happens. This application allows users to follow news and it s situations as revealed to the public. It takes the inputs eg.,likes and follow of news of a user and manages to provide the news to appropriate user. If the user doesn't want to follow the news daily he/she can choose to stop following the news. If users want to see the all the news the user can choose to do so in the application. The application generates news from various resources in the internet and will provide link to the source articles. The pictures and a gist is available in the application once after the user the chooses to follow up user can read up on all the latest developments.
3.	NOVELTY / UNIQUENESS	• Providing alerts when there are new developments in the situation. • Display the news in a novel manner that a user will interest himself on following it. • Instead of manually searching for the updates user will get notified once the updates are received in the public.
4.	SOCIAL IMPACT / CUSTOMER SATISFACTION	• Curbs unnecessary time spent on searching the news. • Improves the habit of reading. • New information can be gained which can be used by the user for taking decisions in his general life.
5.	BUSINESS MODEL (REVENUE MODEL)	• We can provide pop-up ads, overlay ads, and other advertising services from third-party advertisers • A pro version without any ads and with added benefits.
6.	SCALABILITY OF SOLUTION	• Inbuilt payment system. • Provide enhanced customer support

3.4 Problem Solution fit

Project Design Phase-I
Problem – Solution Fit

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4. REQUIREMENT ANALYSIS

Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	User must be able to login using the app
FR-2	User Confirmation	The account creation confirmation will be sent to respective mail
FR-3	All news feed displayed	The recent news fetched from the API will be displayed to the user.
FR-4	Filter Option	The filter option can be used by the user to sort out the different types of news that a user can access
FR-5	Search Option	Using Search option, the User can search for news and related news too.
FR-6	Language Based	The language of the news that are displayed to the user can be changed according to the interest of the user.
FR-7	Edit Profile	The user can edit their profile details whenever they wish for it.

Non-Functional Requirements:

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

| FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The UI should be understandable for everyone irrespective of their details like location, language, Interest etc. User should have the flexibility of using the application in any of the devices. Despite of the device the content should be delivered in the correct way.
NFR-2	Security	Only the Authorized and Registered users can access the system with their credentials, no others can access the application other than them.
NFR-3	Reliability	The application must be usable/accessible anytime from anywhere. If a particular is not available or cannot able to display it then other news should be displayed. That is similar news must be displayed always

5. PROJECT DESIGN 5.1 Data Flow Diagrams
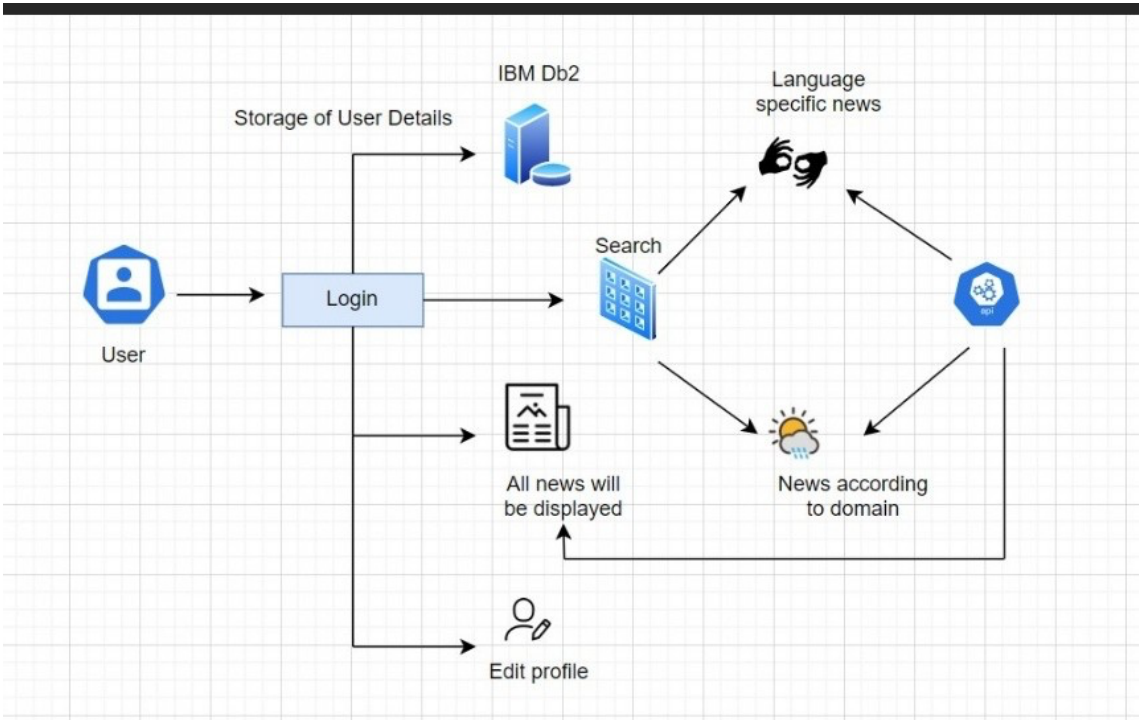
5.2 Solution & Technical Architecture

Project Design Phase-I
Solution Architecture

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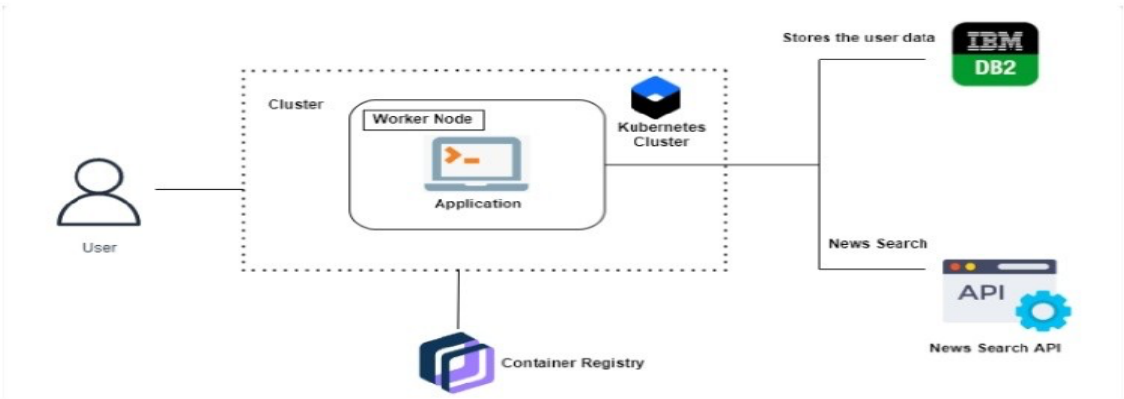
6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

TITLE	DESCRIPTION	DATE
Literature Survey & Information Gathering	Literature survey on the selected project & gathering information by referring the, technical papers, research publications etc.	2 Sept 2022
Prepare Empathy Map	Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem statements	10 Sept 2022

Ideation Brain Storming	List the by organizing the brainstorming session and prioritize the top 3 ideas based on the feasibility & importance.	15 Sept 2022
Proposed Solution	Prepare the proposed solution document, which includes the novelty, feasibility of idea, business model, social impact, scalability of solution, etc.	23 Sept 2022

Problem Solution Fit	Prepare problem solution fit document	28 Sept 2022

	understand the user interactions & experiences with the application (entry to exit).	
Solution Requirement	Prepare the functional requirement document	8 October 2022
Data Flow Diagrams	Draw the data flow diagrams and submit for review.	10 October 2022
Technology Architecture	Prepare the technology architecture diagram.	15 October 2022
Prepare Milestone & Activity List	Prepare the milestones & activity list of the project.	26 October 2022
Project Development - Delivery of Sprint-1, 2, 3 & 4	Develop & submit the developed code by testing it.	By End Sem

6.2 Sprint Delivery Schedule

Project Planning Phase

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

Date	18 October 2022
Team ID	PNT2022TMID12589
Project Name	Project – News Tracker Application
Maximum Marks	8 Marks

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

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	20	High	Yogesh kumaar R Venigalla Akhil A.B Navaneeth Srinath
Sprint-3	Confirmation	USN-2	As a user, I will receive confirmation email once I have registered for the application	10	High	Yogesh kumaar R Venigalla Akhil A.B Navaneeth Srinath
Sprint-2	Registration through Facebook	USN-3	As a user, I can register for the application through Facebook	20	Low	Yogesh kumaar R Venigalla Akhil A.B Navaneeth Srinath
Sprint-1	Registration through Gmail	USN-4	As a user, I can register for the application through Gmail	20	Medium	Yogesh kumaar R Venigalla Akhil A.B Navaneeth Srinath
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	10	High	Yogesh kumaar R Venigalla Akhil A.B Navaneeth Srinath

Result:

News tracker application using cloud is developed and executed at the level of completed progress.

7. ADVANTAGES & DISADVANTAGES

ADVANTAGES:

- In this app news is already categorization.
- Easily accessible and portable.
- Better user experience.
- Apps help us convert visitors to loyal readers.
- Minute by minute updates of news.
- This app helps us to get local news updates instantly.
- To explore and discover trending news and topics.
- News feeds based on our interest.

DISADVANTAGES:

- Some apps demand premium subscription from user.
- Occurrence of Advertisement disturb the user.
- Sometimes the news gives brief information.
- Prevalence of fake and uncertain news can confuse the user lead to misconception.
- Fake news may mislead the readers.

8. CONCLUSION

We investigated the feasibility of identifying patterns in how people interact with news articles and assessed three different interface designs that can adapt to various types of news readers. Our findings indicate that based on a user's interaction history, we can categorize them into three distinct reader types. These reader types, as identified through an online survey, have clear and unique characteristics. The evaluation of the three interface variations suggests that different news reader types require different user interfaces. Our study presents a method for monitoring users' behavior while reading news and inferring their reader type from it. In future research, we aim to deliver deeper into designing adaptive interfaces, ultimately aiming to develop a comprehensive mobile news framework that automatically personalizes news apps.

9. FUTURE SCOPE

In the future we will further explore the design of adaptive interfaces, in order to be in a position to demonstrate a complete adaptive mobile news framework providing automatic personalization of news apps.

10. Source code and Project Demo video

GitHub

Source code: https://github.com/IBM-EPBL/IBM-Project-13148-1659511897

Demo:
https://drive.google.com/file/d/1kzLd5J7NJr8LSdqT6ny_HL3ZiRONlM2S/view?usp=sharing