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Curate: A news app for the millennial news consumers

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Abstract---Nowadays we access news on smartphones and tablets and this virtual news reading is increasing day by day, so there is an obvious need for reading news in personalised virtual app interactions. We collectively analysed a set of studies that addressed the concerns in the process involve in the development of versatile news app interfaces. The goal of this application is to deliver the news extracted from different platforms at a single place as fast as possible. On a priority basis, firstly we surveyed the users, secondly their preferences, and lastly conduct; this analysis of survey outcome into three primary types of readers. This evaluation illustrates the different advantages of the familiarization for various users of the news app and the viability of interactive interfaces for news apps. Then we implemented and developed an Interactive news app.

Keywords---news app, user interface, personalization, design.

Introduction

Nowadays, News is consumed in transforming patterns in Mobile Apps Ecosystems. Recently, the news reading is the ideal for smartphones, because it's majorly for users when they are 'on the go'; now, however, the news is accessed

by two-third of the users and one out of five were reading news write-ups extensively. The rapid growth in news absorption through mobile devices contributes to the migration of news readers to the online platform. The news that is accessed on mobile devices is perfectly and continuously updated from time to time owing to which the users never go out of scale of the news, but today's readers need more than ever for that access to be personalised. Personalised news apps function in a way that helps people to search news which is suitable for them, and to recommend the correct news to the users, and to allow users to have an eye on vast news cover over many sources. This Personalization is achieved with the help of multiple methods that include: pitching and suggesting those filtered news content personalization which matches the user's interests; the changing in order of news categories that makes news browsing personalised; in context news access by offering additional information to the users which is connected to the headlines they are currently scanning; and news accumulation, by recognising the categories users have read in the past arising from various sources.

Personalization of news majorly requires to be extended apart from 'what' type of content is accessed to 'how' it is accessed, as it is quite obvious from the huge number of smart phones apps that offer news personalization aspect. The personalization of news app interaction are successful by building the app interactive. Interactive news interface is such that it will 'automatically' suggests to the users the news, they majorly read, other than that in order of content of headlines that displays previous reading choices and explore different areas.

Related Work

Applications on mobile devices. Bills and Pazzani had created the news recommendation system named NewsDude that recommends news write-ups to the PC users. Basically, they utilized supervised machine learning methods and algorithms for short-term interests and used naive Bayes classifier specifically for long-term interests. Carreira et al. [1] used interactivity logs of smart phone customer which are mainly used to gather user profiles for suggesting articles as per user's interest. Their application registered different criteria of users' reading habits based on time spent, total lines scrutinize, scanning rate, etc.

[2] Inside.com – allows their customers to follow and select topics which are then extracted by them into short summaries of 300-character and also provide the links to the primary origin. [3] Newsbeat, this is a collector but majorly it generates 'personalized radio news'. The end user will select the text news in their interest areas and these stories are extracted from original sources every day, outlines are created, followed by podcasts which is done by text-to-voice technology. According to Oppermann's terminology [4], a flexible system depends on the customer's intervention, the customer is in charge of manually customising the interface based on his needs, whereas a flexible system adjust itself involuntary based on understanding about that customer.

Gajos et al. [5] designed and applied three flexible graphical user interfaces along with a non-flexible baseline to recognize the characteristics of an Adaptive User Interface (AUI) and about it's success or failure. The forecasted efficiency and the

frequency of adaptation of an AUI, which have a prominent effect on the performance of the user, were involved in their results. Further [6], predictability of the AUI improves the gratification and leads to elevated utilisation of the adaptive interface.

Methodology

Problems, Research Goals and Methods

The aim of study is to solve the following questions:

1. What motivates the user to access news through application?
2. How often user's read news through the app? Different types of readers present?
3. Pain points when using the news application?
4. What features would be needed for reading news on app?

To start with we conducted a survey to study the news reading behaviour of the end user of smart devices. The study showed three different types of smart phone news readers characterized by five different factors. Finally, a design covering reading behaviour of each of the different newsreader types were assessed and an interactive design was made. Therefore, distinct types of readers would benefit with a simple user interface.

Recognition of News Reader Types

We analysed from an online questionnaire with the aim of recognising the patterns of behaviour and users' experiences on smart phone news reading apps. Basically, this study was designed to find out reading behaviour, especially on smart devices. The questionnaire consisted of 12 questions based on news reading habits on smart devices which includes the approx time spent on reading the news, recurrence of reading, etc. The specimen contains 15-20 repliers. The only major condition for contributor was that they should read news on mobile phones.

Research revealed fascinating aspects of users. Repliers responded that they go through the news one time in a day for around 8 to 20 minutes, in the time of early morning while commuting. During this they jump to a particular category whereas when they really do the reading they might skim or go through the complete article. This study disclose about three group.

Table 1- News reader types for smart phones readers

<i>Types of reader</i>	'Pursuers'	'Critics'	'Skimmers'
<i>Compression factors</i>			
Repetition	Frequently	Once in 24hr	Less than once

			in 24hr
Gross time	8-15 min	30+ min	0-5 min
Manner of reading	Skimming	elaborate	Scanning
Place of reading	While commuting	Home	While commuting or at Home

The major types of news reader are summarised in Table 1 in relation to the four areas. We labelled these three newsreader types as 'Pursuers', 'Critics', and 'Skimmers'.

Pursuer: This is someone who wants to be aware about the most recent news and updates of topics they are following, they generally read the articles for average 10 minutes and can do it several times a day, like, while commuting to work. Due to the time constraint, they prefer to access the essential bits of news.

Critics: A person who wants to extract up on the headlines, ideally at home. They want an extensive scrutiny of the news and will read it completely to acknowledge the complete scenario (i.e. elaborate reading). They usually read the news once in 24hr, devoting more than 30 minutes to finish-up all the news.

Skimmers: A person with a casual interest in the news but likes to read news on specific topics like entertainment, technology, etc. They are aware about the specific headlines they are interested in hence, just give up to 5 minutes to go through the headlines. They are disinterested in reading thoroughly or in depth and only look for particular facts and lines.

Modules

User Interface

The most important factor in any news app is the visualization of news and its interaction with users. Designing is the most important factor in the development of interactive news applications and provides smooth functioning as the app has clean and easy design. In our app the user can select from different countries, categories and newspapers. Little description with an image before showing the exact full article is proved to be useful as it helps the user to determine the category of the article. The interactive user interface will get connected to API and Admin Panel which provides the exact full article in the web view. By doing so, the integrity of the writer is maintained.

API

API (Application Programming Interface) is an intermediate between the interface and different applications. News API[8] is used to gather news from different resources at a single place. In response it sends description, image URL, article URL, etc.

Flutter

Flutter [9] is an open-source UI software development kit created by Google for building beautiful, natively compiled, multi-platform applications from a single codebase.

Result and Discussions

Procedure

Before starting the design process it was important to create a research plan to understand the news apps in India and it helped to get a wider view to understand the problems as well as to come up with the solution. To start with we done a user case study in which we took interviews and asked the participants questions around the problems after which we derived the key insights from which market and industry research was done in which two popular news applications were used offering similar solutions and was able to gather insights on the trends and features that may be expected from the users. After the study we started with the design phase in Figma which was implemented with the help of Flutter and using NewsAPI.

Findings and Discussion

The following insights were derived from the interviews and market research:

- Most of the users read news to stay updated.
- Newspapers are time consuming and have news which are not of their interest.
- Annoying ads and push notifications.
- Complex UI and annoying ads.
- Multiple apps were required to access different resources.

With these things in focus we made a news app which was user friendly yet providing all the benefits to the user. We implemented the concept of light mode (fig-1) and dark mode (fig-2). The idea behind dark mode is that it reduces the light emitted by device screens while maintaining the minimum colour contrast ratios required for readability, it also potentially reduces eye strain and dry eyes in low-light condition.



Figure 1- Main Dashboard page- Light mode

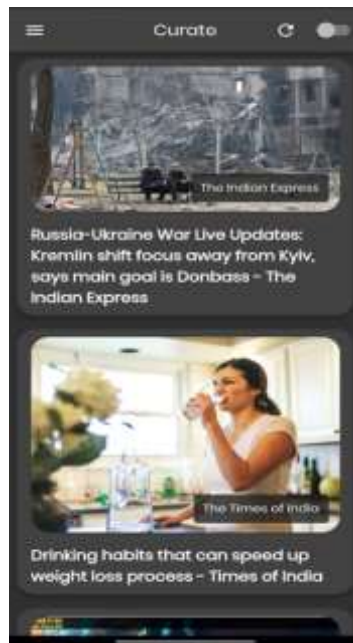


Figure 2- Main Dashboard page- Dark mode

Category section (fig-3) depends on various parameters that will help the different types of users to switch between news as per their requirement and interests and hence stay updated according to the need.

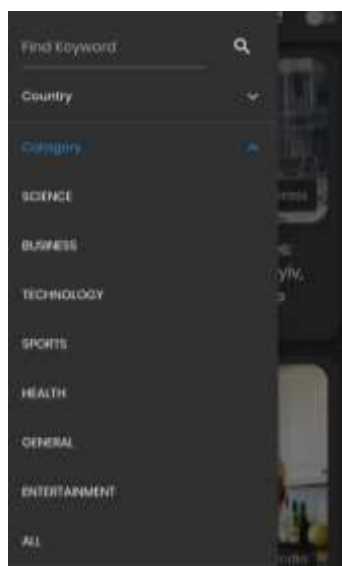


Figure 3- Category section

A specific section called channel (fig-4) is put which helps the user to explore different news channels on a single app instead of downloading multiple apps and saving storage of the device to a large extent.

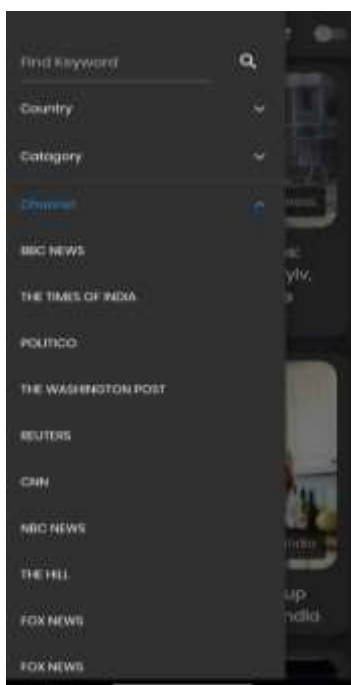


Figure 4- Channel section

Search option (fig-5) will help to provide the user with the best and most efficient user journey possible. This will enable them to search the article with its keyword or heading.



Figure 5- Search bar

Conclusion and Future Work

In this, we developed an interactive news application which operates with smooth switching among categories, countries, etc. This news application basically extracts the news articles from different platforms onto a single place. This is basically designed in a simple way so that all the types of users can use the app easily. Offline reading can be introduced in the app as it will help the user to access the articles without the internet and during low connectivity. A favourite option will be added to save the articles for future need. The Opinion section will enable the user to add their opinions under the articles. More personalization options will be added for the interface which the user can access as per the need.

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