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. Hence we need an application which can get us all the relevant news, including all the latest and critical ones in a structured and curated manner allowing the users to navigate through and consume the content in an efficient manner. This app helps you to query for all information about Indices, Commodities, Currencies, Future Rates, Bonds, etc.… as on official websites.

Our Solution:

Our solution involves building a cross platform progressive web application that can be used by the users to view the news in a feed based view.

By this, the user gets a dopamine hit whenever the user opens the application.

Our product is ideated in such a way that the users will be able to get only the relevant information and news of their chosen topic thus making sure that the users stay with the app for a longer period of time. The features of our product are as follows:

1. Each user has their own profile which will contain information about their chosen or interested topics, and news will be fetched and displayed from only those topics. Furthermore the topics can later be changed as per the users wish.

2. Displaying various stats regarding the user's analytics based on the viewing of various new articles, which allows the user to know about his own preferences and interests in a deeper manner.

3. Option to save stories which can be seen in the users profile, this will allow the user to keep some news stories for quick reference in the future. This is a very useful feature which saves a lot of time for the user, in case they need to revisit something they read or saw before.

4. Allows the users to follow a particular news publication, so that the user can get to know about all the latest news updates provided by the selected news publication.

5. This application not only focuses on the new readers, it can also act as a portal for the news publication houses to understand their viewership and hence we can monetize this to make the app sustainable for the developers.

Our product will be highly scalable as we have proposed to use IBM's Cloud services. Because of that, our product can scale for millions of users and work flawlessly. This could help generate more revenue for the product and move the product towards profitability.

Why it solves the problem:

We've collected all the relevant negative factors of lack of news tracking statistics, along with results from studies and reports that have analyzed the issue.
This guide will give you an unbiased look at why the media reports negative news. We'll provide you with an informed and educated overview of the subject in general.
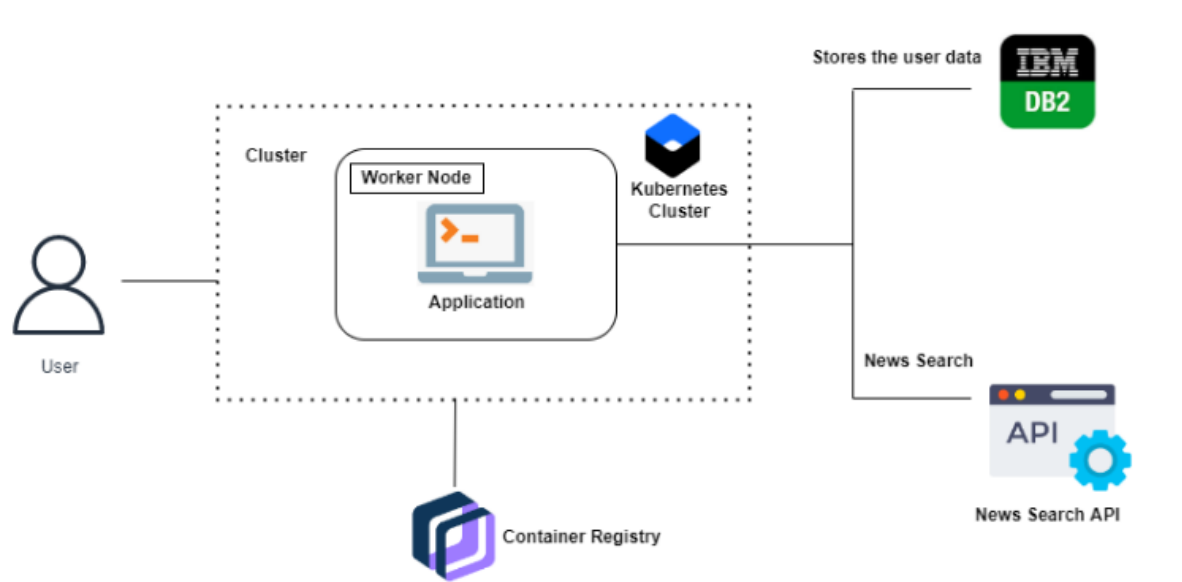
Top Negative News Facts

- Sensationalist stories form 95% of media headlines nowadays.
- Media reports with negative news or statistics catch 30% more attention.
- 26.7% of people exposed to negative news go on to develop anxiety issues.
- 63% of kids aged 12–18 say that watching the news makes them feel bad.
- Moreover, it makes you frustrated when you wake up in the morning and want to know the news in time before getting out to work or college but you are not able to get the required news on time. This may lead to frustration and many people break televisions.

- Nearly 67.92% of the people are not able to track the news they require and a lot of their precious time is wasted which they can use to productively do something.
- Nowadays most of the news are miserable and increases suicidal thoughts and depression seeing them.
- Improper covid 19 figures made several people panic and death due to panic was more than covid deaths.
- So we have built this app where the individual views the news that he likes and wants to know.
- This increases his knowledge and research content in the topic he is willing to invest his time and willingness to know more.
- Lightning News solves this problem and just helps you to focus on the news that the individual required

Architecture:

The proposed solution is a web application, with a ReactJS frontend and a Python Flask backend.

The Flask Server deals with all computational problems such as:

1. Retrieving news articles from various data sources
2. Creating users and registering new new sources
3. Maintaining and updating user data such as preferences, following etc.,

The web application is containerised using docker as container technology supports streamlined build, test, and deployment from the same container images. Also, containerized applications make the application independent of the host environment, thus mitigating the platform/device specific errors.

The containerized web application is then pushed to the IBM Container Registry, which is a service for storing private container images in an easily accessible manner.

A Kubernetes cluster is provisioned on the IBM Cloud Kubernetes Service. This provides easy scalability. Kubernetes clusters support ebay vertical and horizontal scaling, and simple orchestration of containerized applications.

The containerised application requires 3 main services:
1. A Load Balancer to distribute incoming load and provide a Public IP for accessing the application
2. A Web Services to expose the Flask Server
3. A scheduled cron job to periodically collect, filter, organize and classify news from various sources.

IBM DB2, a scalable distributed SQL-based database is used for efficient storage of news articles, metrics and user data.

The news APIs polled include News API, Bing News API, Mediastack etc,