**Artificial Intelligence Powered News Search App**

*Project Report submitted in fulfillment of the requirements for the award of Smart Bridge Internship Certificate*

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**1.Introduction**

* 1. Overview

Artificial Intelligence is an approach to make a computer, a robot, or a product to think or act like humans do. The aim of AI is to improve computer functions which are related to human knowledge, for example, reasoning, learning, and problem-solving. By using the services of artificial intelligence, we can turn our everyday tasks less tedious and more efficient.

The web is home to massive amounts of data, with more being created every day. Organizations can harness this constant stream of information to gain understanding, plan strategies, and find opportunities. Enriched news data can help your application make dynamic connections across current events faster.

Therefore, in this project we make use of various services such as AI, NodeJS etc. to create a simple yet efficient web application for our daily dose of news.

* 1. Purpose

The purpose of this project is to develop a web application that caters to our need of finding the most relevant and recent new articles across the globe and being updated regularly.   
Since the discovery service is integrated with slack there are more than one platform available to search your news through. Moreover, the web application also analyses the sentiment present in this news article and extracts key words and concepts from it making it easier for the user to decipher what is important and what is not.

1. **Literature Survey**
   1. Existing Problem

All existing news applications can be confusing for a layman to use, with multiple functionalities and over-the-top design, these apps still fail to keep up with the demand of the users for the most recent news and often times fetch results from days, weeks and months back which does nothing but confuse the user more.

Additionally, there is no means in these apps to get to know what the approximate sentiment of the public is regarding the news article or topic thereby making it less interactive and user-friendly.

* 1. Proposed Solution

With the Discovery service provided in IBM cloud it is quick and hassle free to create a web application for fetching latest news results. The IBM discovery service when integrated with the node red flow can create a simple and good-looking organized UI that provide the users with relevant news articles as the discovery service is continually crawling the web for latest news to provide

By adding a sentiment analysis feature we make the UI more interactive and easier to understand.

1. **Theoretical Analysis**
   1. Block Diagram

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According to the block diagram above, the user interacts with the UI created through the node red app by searching for a relevant topic for which the user would like to get news about.

The UI which is integrated with the discovery service will make use of service to present latest and most relevant news articles corresponding to what the user searched for.  
Since slack is integrated with the discovery too, we can make use of our own bot and ask it to search for news by typing the keyword and the bot fetches news articles related to the same.

* 1. Software Designing

The following shows the flow for creating the User Interface with which the user will interact to get latest news.

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1. **Experimental Investigation**

We first use the discovery service on its own and configure and query it by adding our own collection. A node red app is created in which the discovery is integrated, and a simple 5 node flow is created for entering the news topic and results show related news items.

Slack is then integrated to the Watson discovery service so that news articles can be fetched from more than one platform and lastly, sentiment analysis is done on the data/news items that is fetched.

1. **Flowchart**

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1. **Result**

The Watson discovery application will be able to fetch relevant news articles within milliseconds, provide sentiment analysis on the fetched data, extract features, concepts, and keywords in the data all in the from of a simple UI.

A screenshot of a social media post

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A screenshot of a cell phone

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![A screenshot of a cell phone

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Access the UI using the link: <https://node-red-qfjcy.eu-gb.mybluemix.net/ui/#!/0?socketid=cR95YuuoFMXp2oEKAAAI>

1. **Advantages and Disadvantages**

* The web application provides interactive sentiment analysis.
* It can be accessed through more than one platform that is through slack.
* It collects and delivers the most recent data.
* It does not have additional features like storing news history.
* It does not provide a stand-alone app rather uses a web application.

1. **Applications**

* This web applications can be used by any user in need of accurate and fast results.
* Can be used by firms and organizations.
* Can be used in stock market to make predictions.

1. **Conclusion**

This project gives some basic working knowledge of the Watson Discovery Service and showed you how to use Discovery along with JavaScript and Node.js to build your own news mining web application.  
It also gives insight into real-world applications of AI and helps us understand Slack better.

1. **Future Scope**

* The web application van be integrated with cloud and made into a mobile app to use it on-the-go.
* Additional sentiments can be added in the UI.
* Related and trending news topics can be shown to the user.

1. **Bibliography**

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