NEWS ASSISTANT

A Conversational News Application using AI based Voice Assistant

MINOR PROJECT SYNOPSIS

BACHELORS OF TECHNOLOGY

Department of Information Technology

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1 Introduction

Newspapers have been a constant source of news and information for us for about 400 years now. Many technological advancements led to newer ways of delivering news and information about various aspects.This project is an effort to make news reading more fun and interactive using the ALAN voice assistant. The web app is completely interactive and the user is able to get news from any topic of interest just by speaking. The user can access news by category, popular news channels, by terms, etc. The web app is completely responsive and works well with any device such as a laptop, tablet, or mobile phone. The project is developed using technologies such as ReactJS, JavaScript, Visual Studio Code, and Alan AI

This project is based on modern JavaScript framework React.js for Frontend development and newsapi.org API for fetching all news based on different categories.News API is a simple HTTP REST API for searching and retrieving live articles from all over the web. API (Application Programming Interface) which is an intermediate interface between different applications. It provides automation, immediacy, adaptation and personalization. News API provides us the source of news articles from many different sources at one place and updates it in real-time.

This project is integrated with a **voice assistant** which can listen to user commands, operate the application and read the news articles for the user.A voice assistant is a digital assistant that uses voice recognition, language processing algorithms, and voice synthesis to listen to specific voice commands and return relevant information or perform specific functions as requested by the user. Some famous examples of voice assistants are Google assistant, Apple Siri, Alexa etc. The voice assistant in this project is operated with the help of **ALAN AI**,which is an SDK(software development toolkit) service. Alan provides a complete AI voice platform. That is, we do not need to worry about configure speech components, deploy an infrastructure for voice processing or train the speech recognition software.Alan acts as an AI-backend. It lets the app 'understand' the human language and provides a possibility to interact with the app through voice. It makes the use of Natural Language Processing ,which is a branch of Artificial Intelligence

1.1 Rationale

Traditional news gathering methods such as newspapers,radios,televisions have been succeeded for a long time.But with time, they are losing their credibility.The biggest problem is that the TRP based shows in news channels.We get to see only those news what these mediums want to show us. So youth are losing their interest in these traditional mediums and rely on modern solutions such as E-Newspaper, news apps. Although these methods work well, news gathering has never been fun and much interactive as some apps sites are so cluttered and filled with ads that distract the reader.Also, there is no modern solution which can provide news to people with low sight or complete blindness. Our project aims to cut down all these problems in getting the news. Users can interact with the app and get news of their choice. The integrated voice-assistant will help blind people operate the app and read news articles for users.

2 Objectives

This project aims to provide a user friendly and interactive solution for getting news of user choice.

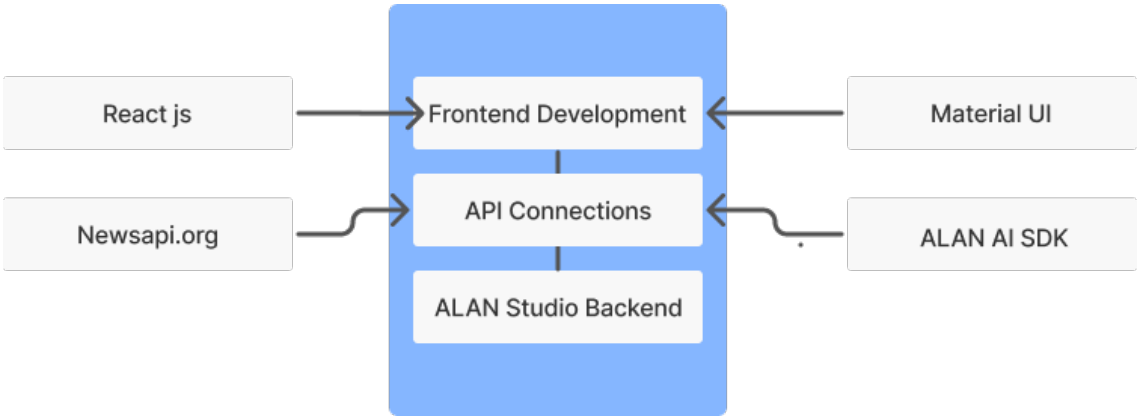
1. To provide a user friendly web app through which user can access news anywhere, anytime based on his or her choice
2. To help people with low sight or complete blindness to get access to news just by speaking some commands.
3. To make the process of reading and listening news fun and interactive, so that user of every age group do not feel bored while reading news.

3 Feasibility Study

- **Technical Feasibility** This project is technically feasible as it is a web based application. It doesn't require much hardware needs. It can run on any device PC, laptops and mobiles as well.
- **Economic Feasibility** Our project is economic feasible as technologies used such as React.js is free of cost. Also NEWS API is free where we fetch the news. ALAN AI is paid for business purposes, but for students, we get a special coupon code of free interactions.
- **Operational Feasibility** It is easily operational project as it is a web based project, does not require any software installation. Also voice assistant integration makes it easily operational for all users included blind people.

4 Methodology/ Planning of work

We plan to work on project by following the **Waterfall model** of SDLC. In it, tasks and phases are completed in a linear, sequential manner, and each stage of the project must be completed before the next begins. The project implementation will be done in three phases :-



- First of all, UI design need to be prepared.
- This design then converted to website using Frontend JavaScript framework React.js and Material UI.
- Then we need to setup ALAN SDK in our application using API key.
- On ALAN studio, we need to make API calls for NEWS API so that data can be fetched on user command.
- At last application will be deployed using free platforms like netlify.

5 Facilities required for proposed work

As it is aimed at proposing a standalone web application, the functional hardware and software requirements of the system are presented below:

- **Software Requirements:-**
  1. Operating System:- Application can run from any operating system supporting modern browsers Edge, Firefox, Chrome, Safari, etc
  2. Frontend Technologies :- HTML,CSS,JavaScript Framework - React.js and Material UI
  3. APIs for Integration :- NEWS API, ALAN AI SDK
  4. IDE for development:- Visual Studio Code
- **Hardware Requirements:-**

Component	Minimum Requirement
Processor	1.9 gigahertz (GHz) x86- or x64-bit dual core processor
Memory	2GB RAM
Display	Super VGA with a resolution of 1024 x 768

6 Expected Outcomes

- Clean and user friendly Web Application
- News based on seven categories Business,Entertainment,General,Health,Science,Sports,Technology from different authorised sources such as BBC news,Wired , CNN etc.
- A voice assistant which get started on a click of button. Fully interactive Voice assistant, which can show articles, redirect to official page of article,read the headlines and short summary of news article based on user commands.
- A feature of saving the articles for future reference.

References

[1] *"React – A JavaScript library for building user interfaces"*, Official React.js Documentation
Available at: https://reactjs.org/docs/getting-started.html

[2] *"MUI: The React component library you always wanted"*, Material UI Documentation
Available at: https://mui.com/getting-started/

[3] *"Search worldwide news with code",News API documentation*
Available at:- https://newsapi.org/docs

[4] *"Alan AI — Conversational Voice AI Platform"*,
Official Alan AI Documentation Available at: https://alan.app/docs

[5] *"Voice processing in Alan AI"*, How Voice processing works in Alan
Available at:https://alan.app/docs/usage/how-works/voice-processing/