Railbot is a telegram-based chatbot function in which users can get information about the trains with the train's id.[15] This chatbot function is related to the Indian railway service. When input a train PNR id and chatbot provide the details of the train and delay time of the train, this chatbot is used in railway API for getting information about the trains. [15] This chatbot is only for telegram users and can only get the details about the train with the PNR id. for a better user experience, recommended implementing this with other platforms like Whatsapp, Messenger, etc.

RailwayBot is another chatbot research related to the railway service. This chatbot provides valuable information about the railway service like seat availability, ticket booking, ticket cancellation [16]. This chatbot is a Facebook Messenger chatbot. So, users can use this system with Facebook. When the user asks a question, the chatbot will provide a link to get the problem. in comparison with others, this chatbot is provide more railway relative details. it is good as a railway related chatbot. Provide detail directly is better than provide a link. It is a good suggestion for this chatbot [16].

Flow.ai is also a chatbot which we can find the location. When we share our location with the chatbot, the chatbot finds the nearest store location [17]. The research is mainly focused on the service-providing company. Customers can find the nearest branch of the company using a chatbot. This chatbot is basically on WhatsApp or Facebook Messenger. Users can type the address or share the location with the chatbot, and the chatbot will identify the user location and provide the nearest store address. In this function, if it provides the nearest location to the user rather than the address, it is beneficial for the user to find the correct location. Also, it can provide some details about the store; it is an excellent additional feature for the chatbot. But this chat bot is not for the railway users.

In the another research. They provide a chatbot for found bus information . The user requests the bus number that runs from the source to the destination from the Chatbot. All of the intentions with bus numbers and routes make up the Chatbot. The user input is then compared to the strings in the intents file, which makes up the Chatbot database. If the input values match the database values, the Chatbot will deliver the outcome by providing the bus number. The user is then presented the output.[18]. this is a different thing when comparing others. chatbot using to the common transport like the bus is a good thing for future. if they can implement this chatbot not only for the bus number but also provide some information about the location, it will be great user experience.

Some related projects are very complex. As an example there is a system with the IoT. The system [19] collects user voice through an Amazon Alexa-enabled device and analyzes it using natural language processing (NLP) techniques to figure out what the user is trying to say or ask and answers appropriately. The echo device is the speech recognition engine, the interpretation software is their Alexa Skill, and they've built a knowledge base through data mining and scraping, then combined it with machine learning and AI algorithms to build an intelligent travel engine. It's developed with MongoDB, MySQL, Elasticsearch, Neural Networks, and a successful Restricted Boltzmann machine implementation for collaborative filtering[19]. this is a very rare and complex chat system compare with others. voice is used as an input is a very good user experience. for the chatbot need special devices. it is one of the cons of the chat bot.

In the another research they build chatbot base robot to interact with users. In creating the Chatbot-based attendance and location guidance system, the suggested prototype includes AI-based learning algorithms (ALGs). The camera analyzes a person's face using Harr Cascade filters and verifies the database, then outputs as a recognized or unknown person via a speaker and display screen. The suggested system's most important features are the attendance database, query, and responding queries from users. The suggested system has the benefit of combining both location identification and facial recognition into one module. The greatest aspect of the proposed prototype is the extra functionality of addressing the inquiry in two distinct languages (Tamil and English). [20]

Some of researchers use some image processing part for the their system. With the use of deep image processing algorithms, the system can locate ancient sites. Archaeologists and other users can interact with the platform by submitting information about archaeological sites using the community platform. To keep the knowledge base constant, deep text summarizing techniques are used. In addition, the platform includes a conversational agent that allows users to quickly and easily obtain the information they need. By employing augmented reality methods, the picture visualization allows virtual visualization of ancient sites. this is a different thing in comparison with others. combine with image processing and chatbot function is good for the modern technologies

**Research gap**

in our system, we implement the deep-learning based chatbot for getting traveling places information for the user.

Users can input questions about the location. Then, load the model and found what the best matching question for the user input is. If user input was matched more than 75% with the sample question, the model returned the sample answer as a response.

There are many visiting places in Sri Lanka. in the first approach, considered only visiting places in the Anuradhapura District. As planned for future work, we will hope to include visiting places all over Sri Lanka.

there are some similarities and dissimilarities between our chatbot and other related works

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Feature | Paper 1 | Paper 2 | Paper 3 | Paper 4 | Paper 5 | Paper 6 | Paper 7 | Railbot |
| Information about railways | Yes | Yes | No | No | No | No | No | Yes |
| Location information | No | No | Yes | No | No | Yes | Yes | Yes |
| Find location facility | NO | No | Yes | No | No | No | No | Yes |
| Voice input facility | No | No | No | No | Yes | No | No | No |
| Image input facility | No | No | No | No | No | Yes | Yes | No |
| Transport information | Yes | Yes | No | Yes | No | No | No | Yes |
| Tourism support facility | Yes | Yes | No | Yes | Yes | No | Yes | Yes |

**Problem**

Sri Lanka has a diverse range of tourist attractions. Some areas are more well-known and well-liked than others. However, there are some stunning locations that are less well-known. Whether the location is well-known or not, tourists should be aware of the information available. It is quite beneficial to the user in gaining an understanding of the location and deciding whether or not to visit. Google search may sometimes be useful in locating information about a location. However, it is ineffective for a variety of reasons. Because the traveler has no clue where the destination is, they might obtain worthless information about a site that they will not be able to visit.. As well as sometime some unpopular places information is not clear in the google and lot of time wasting for that process.

We have a way in the percent to locate such type of information. Posting on social media is one of the most common techniques. Although we can obtain information through social media, this procedure takes a long time to complete, and we cannot guarantee that we will receive just correct responses or replies from that time period.

Another approach to obtain geographic information is to use the Google search engine. However, it is not a suitable approach for obtaining that level of information since we cannot always comprehend or locate all of the facts at the same time.

As a result, we want a rapid and responsive platform to obtain information on trains and tourist destinations in Sri Lanka. It is preferable for the user to get information in their native language.

**Objective**

The chatbot is being developed to address this issue. Users may ask the chatbot any queries they have about visiting destinations, and the chatbot will respond with straightforward information.

The main goal is to create a chatbot program that allows users to obtain information in natural language. As previously stated, there is no reliable technique for quickly obtaining information on trip destinations. It has resulted in the railway and tourist sectors collapsing. The main goal of the chatbot is to give information about vacation destinations in natural language for a better comprehension.

The chatbot will take the user's input, filter the keywords, and apply a deep learning model to find the best appropriate answer. Then he deconstructs the solution and expresses it in simple terms. It is a fairly short operation, and it can solve the difficulties listed.

[18]/ <https://ieeexplore.ieee.org/document/9120905>

[19] <https://ieeexplore.ieee.org/document/8301732>

[20]. <https://ieeexplore.ieee.org/document/9451793>

[21]. <https://ieeexplore.ieee.org/document/9293882>