

## AI based chatbot to facilitate the smart communication for native speakers

### 1. Used Languages:

English, German, Tamil.

## 2. OBJECTIVES

### 2.1 Main Objective

The major goal of the research is to create a multilingual chatbot that is integrated into a mobile application for phones that can give tourists reliable and relevant data about historical sites in Sri Lanka while reducing language barriers for tourists who do not understand English. To deliver a better user experience, this chatbot will apply natural language processing (NLP) methods, including a combination of rule-based and machine-learning approaches. In order to respond to users in their own language, the chatbot will automatically detect their input language. Additionally, this study intends to assess whether the created chatbot enhances the overall tourist experience and whether it has the potential to increase the number of visitors to Sri Lanka's historical places.

### 2.2 Specific Objectives

The research has the following sub-objectives,

- The proposed an AI-based chatbot for tourism that enables users to speak or type in their native language, making the communication process more usable and accessible for tourists who might not be capable in the local language.(English, German, Tamil)
- Automatically identified user's input language and generate corresponding answers.(ex: User input German language text or voice, system will generate outputs in German language)
- This is a mobile application that enables tourists to get information about historical places and landmarks in a way that feels natural and conversational.
- This chatbot enhances user experience and increases the accessibility of information for all tourists by providing text and voice responses in the user's native language. The user may receive text responses in response to text commands. However, if the user speaks his orders, the user will receive both text and voice responses in the language the user chose.

### 3. System Architecture

