

Sevobee: A Slang Translation/Generation Application

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ABSTRACT:

“Sevobee” is a web-based application made with python and streamlit which is deployed on the streamlit cloud platform [1]. It is an application which is used to help the users to understand the meaning of the slang and different abbreviations used by us while messaging each other in day-to-day life. It is accessible to everyone on the internet and they don't need to pay any money in order to access it. The application is designed in such a way that is easily used by both desktop users as well as mobile app users so they will not face any issue regarding using it. Sevobee also provides text summarization feature to its users. There are various pages in the Sevobee app which are-

i. Home Page/ Slang Translation Page

First page when go to Sevobee is our home page or slang translation page. It is the page which is used to translate the slang included sentence into easy human understandable form.

ii. Slang Generation Page

Other page in the Sevobee is the slang generation page in which we can generate new slangs by ourselves and can contribute to the Sevobee app.

iii. About Us Page

The About Us Page is the page which tells all the information about Sevobee to its users like what it is used for, what are the different features that are provided in the app etc [2].

iv. Text – Summarization App

In the text – summarization page on the Sevobee, we can generate summary from a passage or paragraph. A text input is given on it in which we need to enter text that we want to summarize and after clicking on submit button we can able to generate summarized report on it.

v. Admin Page

An Admin Page is also given on the app which can help the admin of the app to manage and monitor the app and its activities.

Keywords- Slang Translation, Slang Generation, Text-Summarization, Python.

1. INTRODUCTION:

In today's world as we know almost everyone talk to each other through face to face and messaging. Instead of writing long messages, we sometime used to write slangs and short forms or abbreviations. But as we adapt this habit of writing slangs while messaging, sometime we use some slangs or abbreviations that are not easy to understand which can sometime make it difficult for us to know what other person want to say and result in disputes sometime. So to deal with this problem we need some sort of app which tell us what's the real meaning behind the slang and translate it in real time and give us result in simple human

understandable form. So here what Sevobee comes into play, it is a full package of application which gives you all sort of essential information about the slang and translate the slang contain sentence in real time and gives perfect result [3]. The main purpose of the web application is to help every user who found difficulty while understanding complex abbreviations and slangs used by our new age generation.

1.1 Target User:

As the Sevobee application is targeting almost every person of the community. Because for every person whether he is a software developer or a sales employee in a company, a CEO or office clerk, normal person, everyone faces this problem in their day-to-day life. As we all chat with our colleagues, friends, family through various messaging apps like WhatsApp, Telegram, etc. and to make sentence short so that we don't need to write much we make use of different short forms and slangs to express our thoughts which sometime make it difficult to understand to people [4]. So, they can make use of Sevobee and can find out what's the real meaning of that slang, etc. No matter of what age you are, the web app is designed in such a way that it explains each and every feature of it in easy terms. So, if I simply put then the Sevobee targets every age of person who find difficulty in order to understand these complex slangs.

1.2 Project Objective:

It is required to achieve the system's objectives in order to attain the system's goal. The primary goal is to create a system for users that will alleviate the problem of users having to visit numerous websites for different services in order to know about different slangs which wastes their valuable time and money. But with the help of Sevobee application they no longer need to worry about this issue. They can now use one app which contains all the necessary services that they need in order to perform their task. Isn't it a good solution which provides every functionality to the users so that only one application performs the whole task form them related to slangs information like translation, generation, etc. It also provides security feature so that the users no longer need to worry about whether their sensitive data is secure or not [5]. The other objectives are summarized below:

- There are several criteria for creating software of this type. First, it must determine whether or not the end customers are satisfied with the software.
- Platform must be decided before constructing the program, such as what tools, frameworks, and libraries would be necessary.

- ✍ For input information, a function or form is needed to input details like text area.
- ✍ Then we need to handle any error if face while inputting detail.
- ✍ Then a model is needed to build which will compute and translate the slangs given to the application and give results.

1.3 Scope of the System:

The proposed system will be beneficial in a number of ways. The "Sevobee" application helps each and every person or user who wants to know about the trendy slangs or abbreviations that are used on various social media platforms. The application gives various features to its users like- slang translation feature, new slang generation feature, real-time and many more. Scope of the software is to give all sort of information about latest and trendy slangs and abbreviations to its users. So, its major advantage is that it will give everything related to slang translation and generation, text-summarization, etc. in one application which will save a lot of time and also saves the wastage of money.

It also provides security of data assurance to the user [6]. The reason of making it as a web-based application rather than a desktop application is that in desktop-based application there is need of first download the software and then we'll be able to use it which wastes both time and space of our machine but web app can be accessed from sitting anywhere in the world and also there is no need to download any file to use it.

2 DOMAIN RESEARCH:

Before starting any project, the developer should have enough knowledge of the domain that he/she is going to be worked on. Domain research is research of the particular domain that you are going to be worked so that at the time of implementing the project you are not having any kind of confusion or something.

As the Sevobee application is a web-based application so we need to have all necessary knowledge of the web-based technologies like the frontend and backend in web development and the programming language which is used to implement it, python is used to implement this project [9]. So, we must have all sort of information or knowledge of these domains.

2.1 Web:

Web or internet is a virtual place where one can access the documents or gain information about anything. Different computer is connected with each other and will be able to share information. Web is one of the reasons of advancement of technologies and online business, websites, software companies, etc. Some of the examples of the web browsers are Google Chrome, Mozilla Firefox, Safari, etc. There are mainly two parts of the web- front-end and back-end[7]. Front-end includes the technologies which are used to make the user interface of the web or front part. On the other hand, back-end is the part where the inner

implementation of web is seen there like server programming, backend logic, etc.

2.2 Web Architecture:

- ✍ Client: The client is the interface of the web application, which interacts with the user or customer. It is also known as the front-end part of the web. Technologies include in it- HTML, CSS, JavaScript, etc.
- ✍ Web server: The web server is responsible for all the inner logic and implementation of data like- routing, session, response, etc. It is the backend of the web.
- ✍ Database: It is the storage place where all the data of the user and website related files are stored in it.

2.3 Justification for Choosing Web as a Platform:

The Sevobee application uses the web as a platform. We use this platform because most of the users use the web and want to access the application freely without any cost.

3. TECHNICAL CHALLENGES:

The challenges that would come on the way of the researcher while working on the technology area are as follows:

- ✍ **Import error:** At first, I faced package or module import error. After carefully check, I found that it was happening due to some version issue like I have low version of python installed in my system and particular package need higher version [13].
- ✍ **Incorrect output:** Next problem that I faced is that while checking or testing web app, sometime it gives incorrect output.
- ✍ **Not user friendly:** At first, I faced problem of making this web app a good GUI app which make it more user friendly.
- ✍ **Invalid input:** Sometimes the user gives such kind of input which is not valid results in error [6]. So to handle it I design the app in such a way that the application simply tells the user that the given input by him/her is not a valid input.
- ✍ **Exception handling:** While making the project, I faced the problem of exception occurs in the program like Unknown Value Error, Unbound Local Error etc.
- ✍ **Platform independent:** Platform independency is an important feature everyone wants. To tackle this problem, I create an .exe file of the application.

4. USE CASE DIAGRAMS:

In this section we see the different project use case diagrams. Below given are the different use case diagrams of the Sevobee application.

4.1 User Modules-

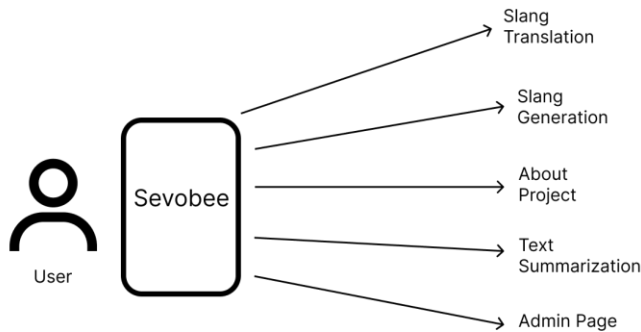


Figure: -1 Use Case Diagrams of Sevobee

Description- As you can see, various pages are given on the Sevobee web app. There are mainly six options are there provided above.

4.2 Slang Translation-

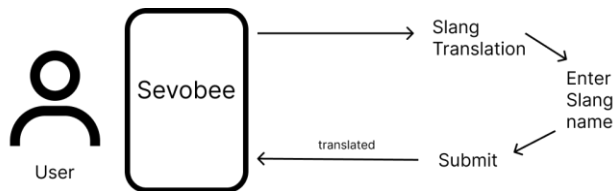


Figure: -2 Use Case Diagrams of Slang Translation

Description- The first page or homepage shown on the Sevobee is the Slang translation page in which there are various features that are given on it like-

- Real-time most searched slang on the web app.
- Input area where the user can type the slang which he/she want to find meaning the off.

After inputting the slang, the user can hit the submit button and the meaning of the slang will be displayed on the screen.

4.3 Slang Generation-

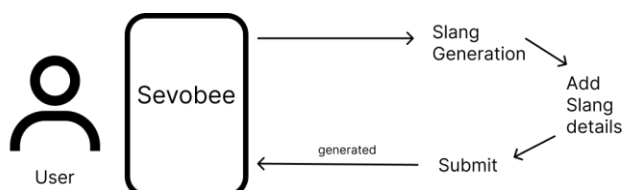


Figure: -3 Use Case Diagrams of Slang Generation

Description- Slang Generation is the page in which there is a feature given on it which can give the users an ability to add more slangs or generate new slangs.

There are two input fields are given as shown in image above, one is the “Slang name” input fields in which the users can type the slang name in it and other one is the “Desc”, where the users will define what is the meaning of that slang [10].

Then, after clicking the submit button, first the app will check is the slang by the same name is already present in the database or not. If not, then a success message will display on the screen [15].

If it is already present, then an error message will be shown on the screen saying” Already present”.

4.4 About Page-

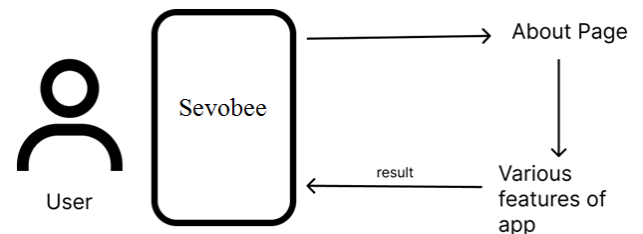


Figure: -4 Use Case Diagrams of About Page

Description- There is also an “About Us” will be given on the web app will help the users to understand the application better. It helps the users to know things like-

- What is the app being all about?
- How many different pages are there on the application?
- Tell users about each page in detail.
- Help users to understand how the app will look like in mobile (as shown in image above)

So, this is how the users can utilize the “About Us” Page on the web application.

4.5 Text Summarization-

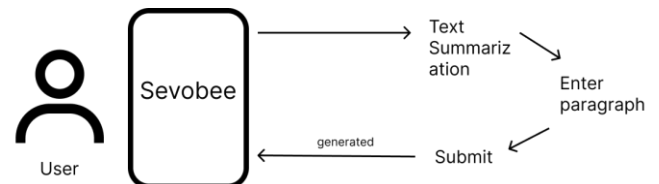


Figure: -5 Use Case Diagrams of Text Summarization

Description- If the user wants to make a summary report, the Sevobee can help him. The app will also provide a feature in it which help the users to make summary of the long paragraph.

It will be done with the help of a Deep Learning Model which is first loaded on the app starts in the background and

help in generating text summarization [14].

There is a text input field given on the screen in which the user can put the paragraph which he wants to summarize. Then he can click on “submit” button and the summarized report will be generated on the screen.

4.6 Admin Page-

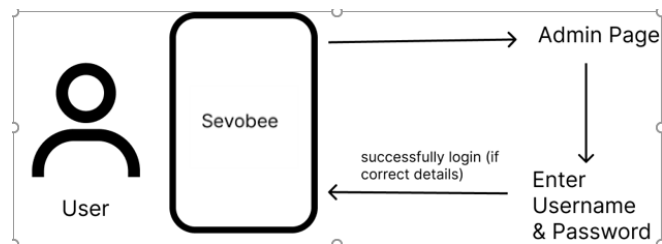


Figure: -6 Use Case Diagrams of Admin Page

Description- The Admin page is the page from where the admin will be able to monitor all the activities of the application.

Admin will also be given power relayed to the database and management.

The page will only be accessible to the admin after entering correct username and password. Another person will not be able to access the admin page.

5. ADVANTAGES:

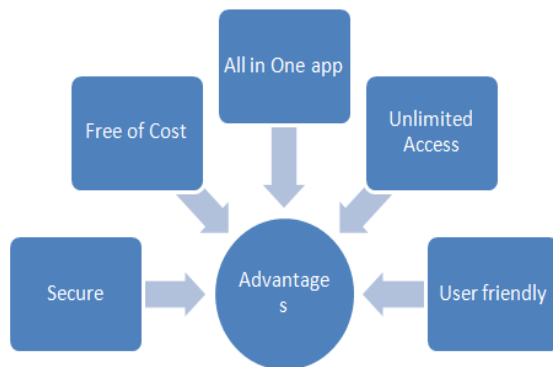


Figure: -8 Advantages of Sevobee

- All in one App** – The Sevobee application is the All-in-one application as in this you’ll get the accessing mode i.e., from Slang translation mode to Slang generation mode.
- Unlimited Access** – If you use an online slang translation app then you would notice that after two or three time, they’ll ask you to buy the subscription plans if you want to use their service but in Sevobee app there is no such thing like that [8]. You can have unlimited access on the software and can use it as many times as you want.
- User friendly** – Another advantage of it is that is a user-friendly application. It is developed in such a way

so that user don’t face any problem while accessing it or using it.

- Free of Cost** – User don’t need to spend a single penny on this application as this is absolutely free of cost.
- Secure** – As it is a web-based application so chances of security also increase as compared to other applications.

6. IMPLEMENTATION APPROACH STEPS:

- First step in the implementation is to design the front-end of the application. We make use of Figma; a designing app for designing app.
- Second, we need to make a virtual environment in the python. Open current directory in the cmd and type ‘virtualenv env’.
- This makes a virtual environment where you can install all dependency modules, project files etc. in it [11].
- Then we need to make a file with .py extension and save it.
- We first install and import the required modules in the file.
- We need to first design the home screen or index page screen in the file by using the Streamlit (a python library package for making web apps using python) in built functions, classes etc.
- We make use of Streamlit classes for making and including the design file made with the Figma Designer app.
- We make various input fields for different inputs like Slang name, etc.
- Next, we make input fields to input the slang name which we want to translate. To make this we make use of Streamlit built- in input class.
- Then we code the inner functionality of these input fields like exception handling, etc.
- After making or developing the home screen, we then go for developing the “About Page” of the Sevobee web app.
- In the “About Page”, we define all the features, which are provided by the Sevobee web app or website.
- Then we develop our third page named as “Slang Generation”, in which we are given two input field where we have to put the slang name and its description which we want to add into the Sevobee.
- Then we develop our fourth page known as- “Text Summarization” page in which we define a text input field where we insert the paragraph we want to summarize, the define a click button which triggers after clicking and generate summarization of the text [12].
- Next, we develop the “Admin Page”, in which there are functionalities given like the database seen, download the .csv file of the database, etc.
- After developing the website, we then move towards the deployment of the website or web app in real – environment.

- xvii. We choose the Streamlit Cloud for the deployment of the web app. To deploy it, we first make an account on the Streamlit Cloud platform.
- xviii. Then we choose the name of our website (Domain name) and import all our project related files on it.
- xix. After importing the files, we then test our web app, and if everything works fine then we finally deploy it on web.
- xx. Finally, our web app is live and can be viewed by anyone on the internet.

7. CRITICAL APPRAISAL:

The developer has tried to add all the features of slang translation and generation in the Sevobee web application and developed it in such a way that it can be easily accessible by all stages of humans like kids, adults, etc. The developer also provides security of user's information in the Sevobee so that users now no need to worry about their data privacy and leakage [13]. The web application is ready to be deployed and use after doing fully functional testing of it which finds errors if present in the application and helps the development team to remove it. The app provides various features in it like slang translation and slang generation, text summarization, real time mostly searched slang on the Sevobee which makes it unique and different web application from other web apps on the internet.

8. LIMITATIONS AND ERRORS IN THE DEVELOPED SYSTEM:

- ✍ The web app may not have all the slangs detail present in it.
- ✍ The device needs to be internet-capable for some of the functionality.

9. FUTURE ENHANCEMENT:

- ✍ Personalization options that let users modify the app according to their needs can be added to the app in the future to improve it.
- ✍ There is a safe feature will be added in the slang generation to stop using abuse words.

10. CONCLUSION:

At last, we here conclude that Sevobee is a great web application for providing information about slangs like slang translation/generation and meet all the requirements of the end users.

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