Image Story Teller

Kshitija Patil[1], Sonal Patil[2], Rupavati Prajapti[3], Prof. Sweety Rupani[4]
[1, 2, 3, 4] Department of Computer Science and Engineering
[1, 2, 3, 4] Vidyavardhini's College of Engineering, Vasai

Abstract- *Image Story Teller is a website which represents a text story given by the user or a particular description to its corresponding image form. It retrieves images for each and every sentence separately, and hence is way different from conventional image search in which engines search one image for a collection of sentences. Since representing entire story with a single image is would be practically meaningless, we have customized the search which is limited to the content which user types. This helps people in understanding and visualizing the story in a better way .*

Keywords- Natural Language Understanding, Image story board, Natural Language toolkit, Tokenization.

I. INTRODUCTION

We are implementing an application which will convert a text input i.e. a story into its corresponding image story. The website developed in this research work is an "image story board" that allows the creativity of text to take its own colorful and attractive form for a much better understanding.

The research includes developing a website which will convert the text into its corresponding series of images. The website will be a medium for the whole story with respective images for each sentence in it. Relevant images are fetched using an Image Search Engine after analyzing the meaning of each sentence in the story. The representation is now in the form pictures which convey the summary or important aspects and features of the text.

A text can be long enough according to the limit specified but only one sentence would be analyzed for fetching image at one time. NLTK module available in Python analyzes the text and detects words from the sentence which are actually meaningful and can be used to search relevant image options. In the given story each word is tokenized first. Each tokenized word goes under the tagging process which assigns every picture a tag for itself using the tagging feature of NLTK module in python. A PHP program is fed with these tagged words and by analyzing these tags associated with every word in the sentence the PHP program will generate a search key corresponding to every sentence. This search key is the main factor used in searching images through the search engine.

II. LITERATURE SURVEY

These kind of applications are available which are focused towards addressing physically or mentally challenged children's requirements or basically just for kids so that they are able to understand what is being written more clearly. Pictures make the whole process more convincing. Few already existing systems which work on a similar background are : Nokia Story Teller, Stellar, Contour etc. But these applications are bound by certain limitations and drawbacks such as platform dependence, similar features as that of social networking sites, retrieval of non-editable images, slow response time and usage of huge memory space.

Hence comparatively, our proposed system tries to avoid all such complexities.

III. PROPOSED SYSTEM

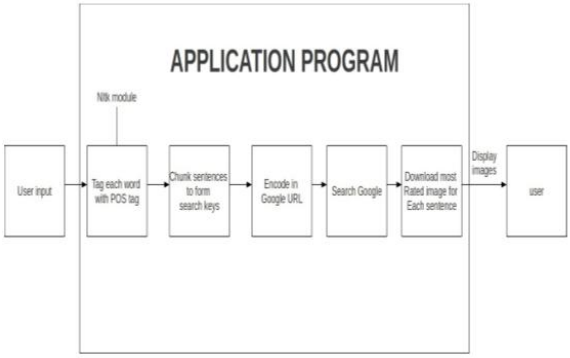

Figure 1.

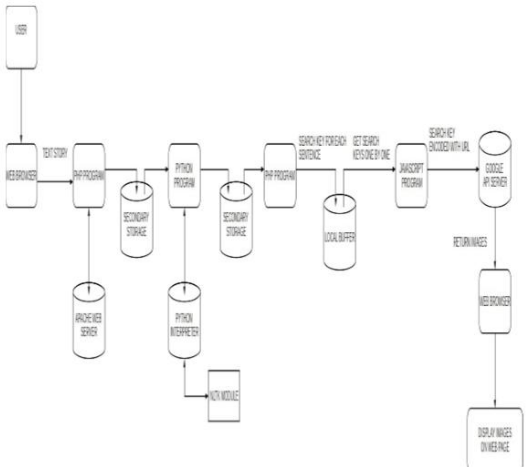

Figure 2.

Stage 1 –

Website using HTML, CSS. It consists of 3 basic sections. First is the Home page or the Introductory page which helps the user get started with his agenda and explains how the overall application works for their benefit.

Second is the Story writing page wherein we provide a editable text box for the user to type in his own input which he wants to get processed.

And third section is our Story gallery where the complete series of images of the current story being processed can be viewed.

Stage 2-

Operation on the text input given by the user to fetch corresponding images.

The text input in stored in a text file which is first broken down into sentences because the process happens on every sentence separately. Every sentence then goes under tokenization and Tagging using a python code.

Stage 3 –

Using search engines for fetching images from the internet.

In order to search images from internet and avoid garbage images we need to embed a suitable image API into the system so that it retrieves only most suited images.

Stage 4 – Retrieving images

Connecting our image API to the php file where we have stored the tagged words so that with the help of key generated the relevant images are fetched from the internet.

We make use of brute force string matching algorithm to compare the tags and the keys associated with the images in order to retrieve the most apt ones. The user can customize the search with respect to the size and no. Om images to be fetched.

Stage 5 –

After the images are displayed on our application, user is given a choice to select one image for the particular sentence by his choice. This particular image gets added on to our story gallery and our database. When all the sentences are done, we can go and view the images as a story one after another.

IV. EXPERIMENTAL RESULTS

Figure 3.

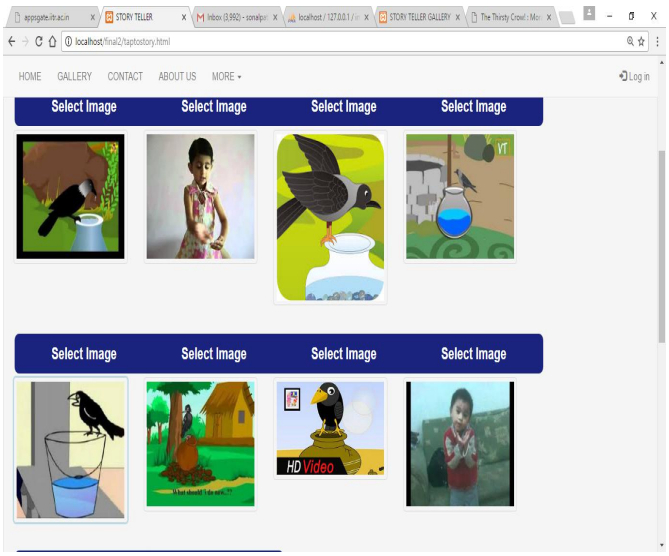

Figure 4.

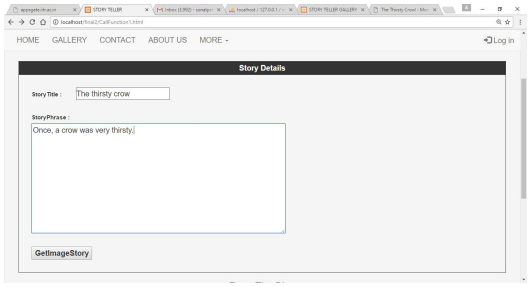

Figure 5.

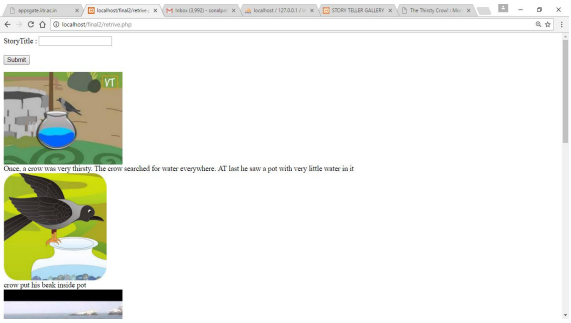

Figure 6.

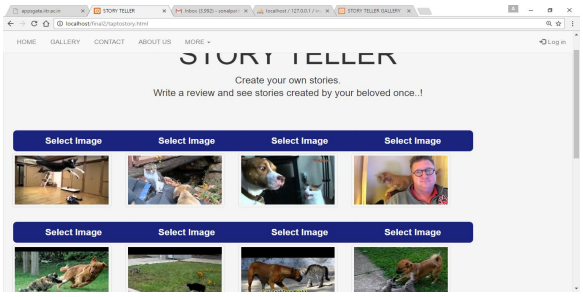

Figure 7.

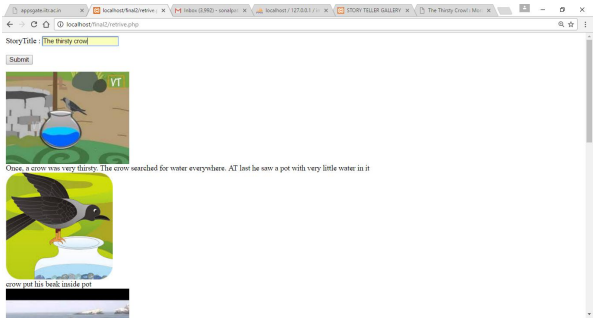

Figure 8.

V. CONCLUSION

The system technically does a Conversion process from text to its relevant pictures for the user to comprehend its content in a visual format. This application is evaluated by a number of people belonging to different age groups as well as various backgrounds and agendas. Based on the Liker's Scale, most of them agreed on the Usability and User-Friendliness of the system. According to the respondents was helpful tool for their personal and daily use. No one among the respondents answered that the system is not efficient for them. For the Usability of the System, the researchers concluded that the system need some improvements like animated images and sounds to capture more attention from the children. While for the User-Friendliness the researchers concluded that the objects inside the GUI are improperly organized to them.

VI. ACKNOWLEDGEMENT

Our thanks to our college VCET and our department of Computer Engineering which have extended all their support and necessary requirements which we have needed to complete our project. I extend my immense gratitude to my guide, Prof. Sweety Rupani who supported us throughout with their patience and knowledge.