International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 10, Issue 3, March 2021)

Imaginary World

Divyanshu Gupta[1], Pankaj Rai[2], Singh Shivaji Yuvraj[3], Sharma Niteshkumar Mahendra[4],Farhin Mansur[5]

[*]*Computer Science Department, Laxmi Institute of Technology, Sarigam*

[1]divyanshu21gupta@gmail.com,[2]Pankajrai1234kmps@gmail.com[3]yuvraj776524@gmail.com
[4]niteshsharma14321@gmail.com[5]farhin.lit@laxmi.edu.in

***Abstract*— Generating an image from natural language is one of the primary applications of recent conditional generative models. Image generation from a given text description, is a very challenging task due to the significant gap between the two domains. By analyzing and observing we address that many primary school students are unable to understand the exact meaning or concept of the content. They only used to memorize the word, sentences and paragraph without knowing the meaning. Due to this the understanding power decrease and they remember for a short span of time. And we heard that pictorial format is more useful to understand the concept and content and also to remember for a long time. Therefore, to help the primary school student, a system is proposed name Imaginary World, which is an android application for text to image generation. Text to image is done with the help of GAN (Generative Adversarial Network)[4]. Here students will give input as textual data as input and system will generate image as output. In this application student can give input as word, sentence and paragraph and system will generate the image in the consecutive manner.**

***Keywords*—Text to image generation ,creating image from text description, text to image synthesis, text to image using GAN, Generative Adversarial Network(GAN)[4]. AI Image Generation, text to image translation using GAN, realistic image synthesis[2].**

I. INTRODUCTION

Generating an image from a given text description has two goals: visual realism and semantic consistency. The proposed is a web application to convert text to image with the help of GAN (Generative Adversarial Network). Most of the primary school students are getting difficulties to understand word sentences and paragraph. They only used to memorize the content without known the exact meaning .due to this they remember for a short span of time. And virtual realistic image helps the human to understand the concept easily and faster.

The main aim of our system is to convert text into image with the help of GAN [4].Here student will text as input and system will generate image as output. Text like word, sentences and paragraph will be given as input and first long sentences and paragraph will summarize and after that line by line text conversion will take place there will be our own database from where the system will generate output and in case if the system is not found the image then it will forward to Google to fetch image.

II. RESEARCH

Before working on the project we went through some of the existing application and research papers that claim to provided similar functionality, we reviewed existing application in detail: graph plotter-it is an website which will generate a graph of any give mathematical equation[10]. Other than this we have also search about GAN (Generative Adversarial Network) in swayam NPTEL courses [8], other website like tensorflow.com[7], standard Mi/AI journal, from various research paper from goggle scholar.com[9].

III. PROPOSED SYSTEM

By analyze that many school going student try once test to learn something by repeated reading without necessarily understanding the subject /topic. In another word they used to crump up the things. Because of this they used to remember for a short span time. Student will interact with system by giving textual data as input and system will generate as output. Large textual data will summarized and after that line by Line text to image conversion takes place.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 10, Issue 3, March 2021)

IV. HARDWARE AND SOFTWARE

	Hardware Requirement	Software Requirement
Developer Requirements	Laptop, desktop(processor Intel i5 and above) RAM 8GB and above HDD512GB and Above	PythonIDE3.5 Android OS Android Studio3.5
	GPUNVIDIA GTX1050 VRAM 8GB	
User Requirements	Android Device	Android Version (4 and Above)

V. FLOW

The following flow charts depict the flow of the whole system where, firstly students starts the application then the application homepage shows. After that homepage provide the option of login and register, if the student is already register then after clicking to the login option, the login page shows and after entering the details the student will successfully login to our application. And if the students is new student then, after clicking to the register option and by filling all the details the student will successfully register to the application. After login and register a new page will shows. There will be a input text box where student will give input .the input must be in text form. The application provides the students to enter the text into two ways by typing and by scanning .after entering the text into the input box, the text will pass to the GAN (Generative Adversarial Network) and it will summarizethe text and create a virtual image from the given text . After creating the virtual image the GAN will first search the image from the home database .If the image is found in the home database then the result will send to the output screen. And if the image is not found in the home database than it will search the image from Google and send the result to the output screen. And if the image is not found in home database and as well as in Google than the virtual image which is generated by the GAN will be shown in the output screen. The application will provide only three attempt to generate the image for a given text.

After three attempts if the image is not generated or not found than a message will be shown in the output screen " The given text image is not found".

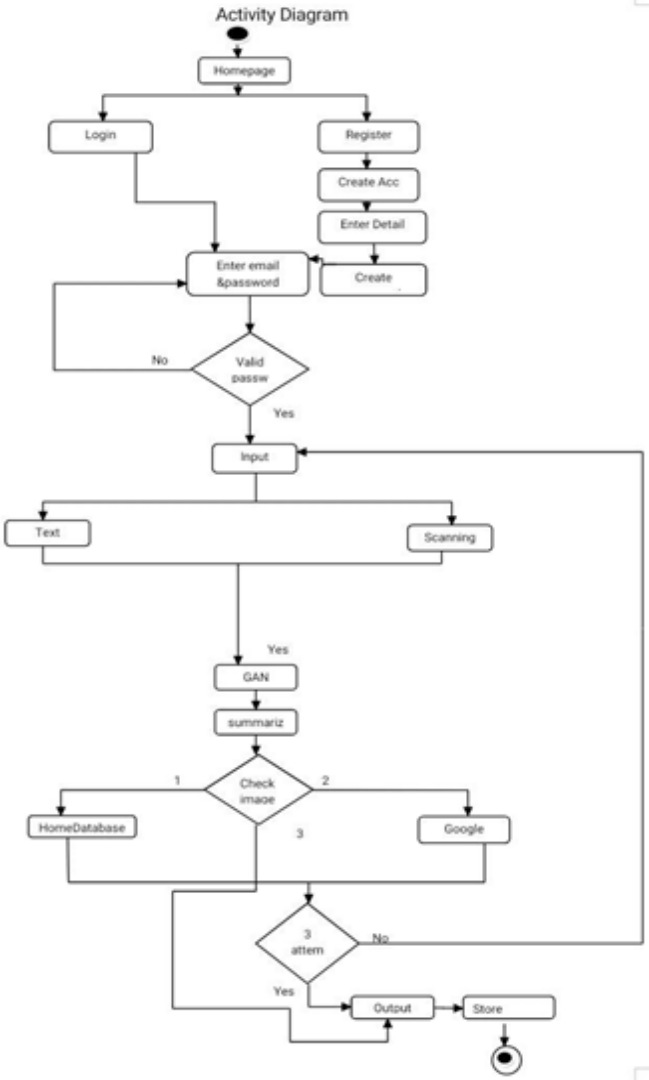

Figure 1: The flow of the system

VI. WEB APPLICATION

The primary goal is to offer mobile, laptop friendly content to the widest possible audience (user) so we are making this website. The Reason behind we are making this website over mobile apps is because websites are instantly accessible to users via browser across, a larger range of devices (iphone, android, phone).Here name of website is Imaginary world, this web app will generate imaginary image of provided text by user.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 10, Issue 3, March 2021)

In these web app users can sign in, login and view past history of searched text and finally interact with our web app by providing text as input and get output as Image of relatedtext.

Users: The main target audience is teenagers students and primary school teachers they can register them self with their personal detail like email id, name. After registration they can login and use web app for educational purpose. Here student can use web app for learning by giving text in case if the system is not found the image then it will forward to Google to fetch image.

Which they are not able to understand while Teachers canuse this website for teaching teenage students.

The Following figure shows web application activity.

Figure 1: Home page

Description: The above figure shows the web application home page.

Figure 2: Log in page

Description: In this page User has to login to access the service .User has to simply type user name and password.

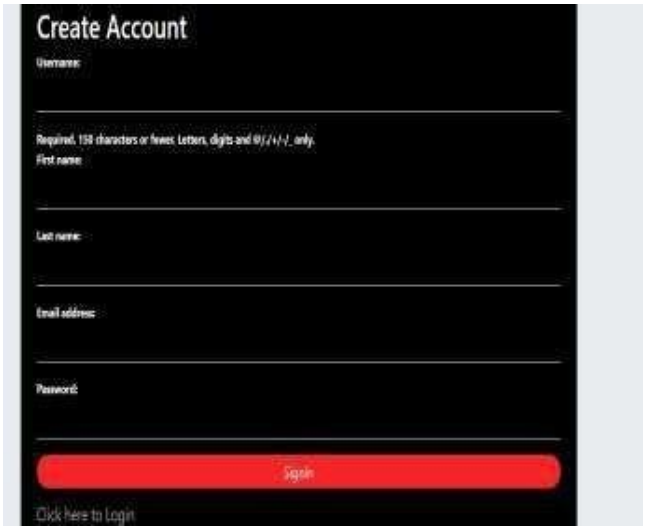

Figure 3: Sign Up page

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 10, Issue 3, March 2021)

Description: in this page user has to create account if the user is new or not register to access the services. User hasto add detail such like username (unique) First name, last name, e m a i l password etc..

Figure 4: User input page

Description: In this page user can type it desire text, sentence, word into the provided text box. And then user has to click the button convert to image and the system will generate image as per as text description of user. As shown above figure user has input some text. and system will generate output base on text description. As an example: User has input in text box: There are hundreds of types bird on earth and each of them is unique. For Example: the peacock has magnificent tail made up of beautiful feather, the parrot is a bird that can learn to talk. Crow is a smartest in bird kingdom. A hummingbird can sing, nightingale bird is also known for its melodious voice.

Figure: output 1

Description: System has generated image of text There are hundreds of types bird on earth and each of them is unique. For Example:

Figure: output 2

Description: System has generated image of text: the peacock has magnificent tail made up of beautiful feather.

Figure: output 3

Description: System has generated image of text: Crow isa smartest in bird kingdom.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 10, Issue 3, March 2021)

Figure: output4

Description: System has generated image of text A Hummingbird can sing.

Figure: output 5

Description: System has generated image of text: Nightingale bird is also known for its melodious voice.

VII. Result

The purpose of the text to image Generation system is to develop a simple and effective GAN architecture and training strategy that enables compelling text to image synthesis. System will take any text as input ,after that it will get summarized like a big sentences or paragraph get split into multiples lines[2] and after that every line as input is given to GAN and that GAN will generate image corresponding to related text once the image is generated, image is shown output with related text below this procedure will take place for all summarized text. Thus a small initiative has been taken to help students to learn the things in pictorial or picture format representation.

VIII. Concluson

System will help the School going Student to visualize the Text, paragraphs in easy way. By first check the Validation of user and the it will Summarize the text and generate image from text Authors

IX. Future Work

Imaginary world help the School going students in solving the problem which they are facing in their studies in understanding word, line, paragraphs. In future imaginary world is a platform in which student can share their problem related to studies get solution if the don't understand by the image generated by text to imagine synthesis so there is a open discussion section in website

First Author – Divyanshu Gupta, BE (C.S.E), Laxmi Institute Of Technology,
email: divyanshu21gupta@gmail.com

Second Author – Pankaj Rai, B.E (C.S.E), Laxmi Institute Of Technology,
email: pankajraikmps1234@gmail.com.

Third Author – Singh Shivaji Yuvraj, B.E (C.S.E), Laxmi Institute Of Technology,
email: yuvraj776524@gmail.com.

Fourth Author –Sharma Niteshkumar Mahendra,B.E (C.S.E), Laxmi Institute OfTechnology,
email: niteshsharma1432@gmail.com.

Fifth Author - Miss. Farhin Mansur, Laxmi Institute Of Technology,
email: farhin.lit@laxmi.edu.in

REFERENCES

[1] http://www.google.com
[2] http://www.tensorflow.xom
[3] http://scholar.com
[4] http://dataset.com
[5] https://arxiv.org/abs/1903.0585
[6] http://arxiv.org/abs/1904.01310
[7] http://online.visualparadigm.com
[8] http://www.npteliitbaymachinelearning.com
[9] http://www.googlecolabjupiternotebookpython.c om
[10] http://www.graphplotter.com