Abstract
Now-a-days we are almost completely dependent on information system for our day-to-day work. Almost every organization of different sectors has their own website. These websites are visited not only by the native people but also by the foreigners. But sometimes they are unable to do so because of language barrier. At present, many translating tools are available but they are either for translating text of a website or translating text from an image. At some cases people have to copy the text and then translate it separately which is a lot of hassle and time consuming. We aim to implement a website translator which will take the URL of any website and translate it in any language. It can also translate the text of the images of that website. We have also created some more new algorithms for URL translation, English to Bangla number translation and English to Arabic number translation.

Index terms—
Website Text Translation and Image Translation from a URL using Optical Character Recognition (OCR)

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save it in a file. After that we call the .txt file and show it to our website. When we select an image URL, we see that .txt file along with the image and translation tool. Now we can translate the image and read the image text in any language. The figure ?? portrays the translation process of the text from an image url. We also show the image text in a format so that it is easy to understand and easy to read.

1 II. Implementation Details

Lastly, for image translation, we take an image as an input to translate the image text along with numbers. We use our own algorithm to translate the image text and numbers as a sample we use English to Bengali or English to Arabic/Persian Language translation. When we put an image, it converts the image to text and put it in a .txt file. Then using a function to convert the numbers from English to Bengali or Arabic/Persian numbers and show the whole file in our website after converting the numbers and we get the following results in figure ??.

And figure ?? shows the translated view of an image sample from English to Bengali and from English to Arabic respectively.

2 IV. Results Analysis

This section describes the results of our works. In all three sectors of our work, we used the term Accuracy to calculate the performance of them.

Accuracy: It is defined as the ratio of translated words and total words. Here w is the number of properly translated words, and W is the number of total words.

3 Accuracy = w / W

We have experimented Up to 70 websites and up to 50 random images with our approach. Our website reaches almost 83 percent accuracy in the field of website translation and 85 percent in the field of translation of images from those websites. The accuracy of the translation of the random images from English to Bangla reaches 98 percent and from English to Persian it reaches almost 93 percent. We tested this approach with various text fonts, and our website accurately translated them all.

4 V. Conclusion and Future Work

We have implemented an easier and userfriendly website which takes an url as input and translate the website in any desired language. Using this platform, users will be able to get the information of any website in their comfortable language and it is also timesaving as it translates any website using only a URL. It also translates the texts inside the images of the website. The users are also able to extract the texts of a random image and we have used our own algorithm to translate the English numbers to Bangla and Arabic numbers. In future, this paper will be helpful to build a mobile application where one can add camera module to take an image and translate it through the app where they can translate numbers too. This paper can also help to build an app or a website that will be able to take any url from any barcode and translate both the text and images. In future this paper will be helpful to create a new algorithm to translate text of all the images of the website in a single webpage along with the web text just like the original website. 

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Figure 1: Figure 1:
V. CONCLUSION AND FUTURE WORK
Figure 3: Figure 5:
4 V. CONCLUSION AND FUTURE WORK

Figure 4: Figure 6

Figure 5: Figure 6:

- Take an image file
- Save the image file as "test.jpg" file
- Use OCR to extract the text from the image and save it in a .txt file and put the file in a variable "Stxt"
- To translate the text of the image with Bengali along with numbers create a function named "banglaConverter()"
- Display the "Stxt" variable to translate it in Bengali
- Convert the number of English to Bengali using the function "banglaConverter()" and put it in a new variable "Stxt"
- Put the number of English and Bengali in two different arrays
Figure 6: Figure 7:

1. Take an image file
2. Save the image file as "test.jpg" file
3. Use OCR to extract the text from the image and save it in a out.txt file and put the file in a variable "Stxt"
4. To translate the text of the image with Bengali along with numbers create a function named "convertEnglishToPersian()"
5. Display the "Stxt" variable to translate it in Bengali
6. Convert the number of English to Bengali using the function "convertEnglishToPersian()" and put it in a new variable "Stxt"
7. Put the number of English and Bengali in two different array
[Pratik Madhukar Manwatkar et al. (2015)] ‘A technical review on text recognition from images’. Pratik Madhukar Manwatkar, Dr., R Kavita, Singh. IEEE Sponsored 9th International Conference on Intelligent Systems and Control (ISCO), 2015.

[Kubatur et al. (2011)] An Image Processing Approach to Linguistic Translation, Shruthi Kubatur, Suhas Sreehari, Rajeshwari Hegde. December 2011. Bangalore, India. Dept. of Electrical & Computer Engg, University of Windsor, Windsor, Canada Dept. of Telecommunication Engg, B.M.S. College of Engineering

[Smith (2007)] ‘An overview of the Tesseract OCR engine’. R Smith. Ninth International Conference on Document Analysis and Recognition, 2009.

[Canedo-Rodriguez et al. (2009)] ‘English to Spanish translation of signboard images from a mobile phone camera’. A Canedo-Rodriguez, S Kim, J H Kim, Y Blanco-Fernandez. 10.1109/SECON.2009.5174105. IEEE Southeastcon 2009. 2009. p.

[Hemalakshmi et al. (2017)] ‘Extraction of Text from an Image and its Language Translation Using OCR’. G R Hemalakshmi, M Sakthimanimala, J Salai Ani, Muthu. International Journal of Engineering Research in Computer Science and Engineering (IJERCSE) 2394- 2320. April 2017.

[Kumar (2000)] ‘FLD based Unconstrained Handwritten Kannada Character Recognition’. SK, Vijaya Kumar. International Journal of Database Theory and Application December 2000.

[Seethalakshmi et al. (2005)] ‘Optical Character Recognition for printed Tamil text using Unicode’. R Seethalakshmi, T R Sreeranjani, T Balachandar, Abnikant Singh, Markandey Singh, Ritwaj Ratan, Sarvesh Kumar. Journal of Zhejiang University SCIENCE 1009-3095. 2005.

[Azmi Can Özgen and Fasounaki (2017)] Text detection in natural and computer-generated images, Mandana Azmi Can Özgen, Fasounaki. 2017. (Hazim Kemal Ekenel)

[Khan et al. (2020)] ‘Tourist’s Translator based on Digital Image Processing and Hybrid Translation’. Rijwan Khan, Aryan Kaushal, Ayush Agarwal, Aydhes Kumar. International Journal of Innovative Technology and Exploring Engineering (IJITEE) 2278-3075. March 2020. (9).