Soft Writing: An Image to Text Convertible Application

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Abstract- *In this digital world, to achieve a high speed in the processing of data it is almost compulsory to convert the data which is in analog form to digital form. The whole process of storing all the data in hardcopy form is nothing but time consuming. Nowadays there is a growing demand of storing the information available on paper documents into a computer readable form for later use. OCR is widely used in various fields like optical music recognition and handwritten recognition. There is need of Optical Character Recognition to perform analysis of the given document image and convert it into electronic format.As we know different coaching institutes and companies conducts tons of seminars, Now, there is always feedback form or a review form where the attendees of that seminar give their feedback or provide personal information in educational seminars. All these data take quite a time to load up in the computer even if there is hired employee for data entry. In Soft Writing it is way easy to just click a photo upload the photo and after that the admin will easily get access to all the data about seminars.*

Keywords- Optical Character Recognition, Technology Enhanced Reality, Image to text, Special Intelligence, Snapshot Converter, Illustrating Photograph to Text.

I. INTRODUCTION

As the time passes by every second the world is updating, evolving and learning new things. There is a huge demand for the software systems to recognize the character in computers after the information is scanned through papers or any other hard copies. Character recognition is one of the most unique and interesting section of pattern recognition.

There are plenty of seminars conducting every single day, in which the feedback form is kind of necessary, where in our application the scanning part takes process from user's side for uploading photos and the admin side gets captured data in a mannered way. Which is to examine the seminar data by searching seminar name or seminar date any such ways.

The flowchart shows user and admin side, now in user side, after logging in the user will decide the name and date of seminar, then the photo is clicked and asked whether the photo should upload or not. They it will pop up a message showing the photo is uploaded. In admin side, after logging in the admin can choose the seminar via date or name and after that the statistics are displayed. And then admin can download the excel file. Overall, the procedure isfully digitalized with an aim of saving time, money and manpower.

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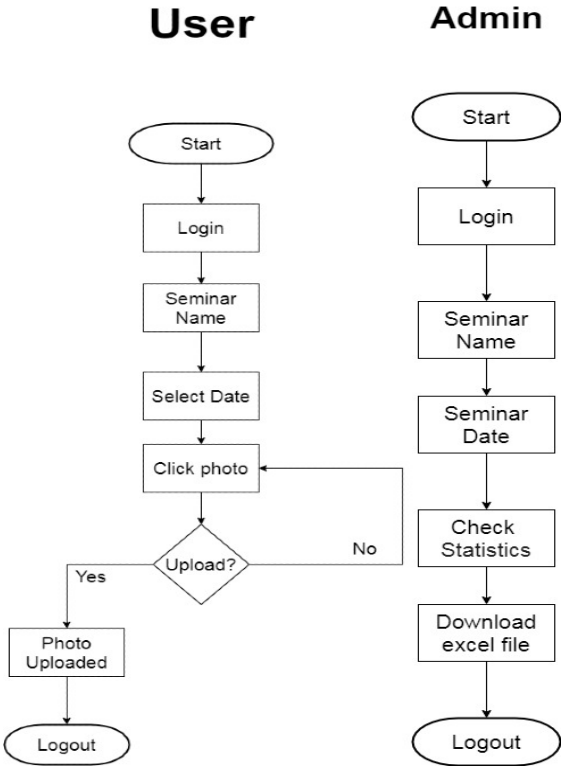

Fig 1: Flowchart of User & Admin

II. LITERATURE REVIEW

As discussed earlier, Text recognition from images is still an active research in the field of pattern recognition. The very first commercialized OCR of this generation was IBM 1418, which was designed to read IBM font407. Template matching was the initial recognition method.

Most of the Education centers and companies had to pay a stipend for a person for data entry job which is nothing but money and time waste, also the manpower factor is always there. There are different hotels and restaurants which have a QR code at the table just to simply scan the menu, this way time and money is saved.

Next generation machines were able to recognize regular machine-printed and hand printed characters. The character set was limited to numerals and a few letters and symbols. Such machines appeared in the middle of 1960s to early 1970s.

After the entry of all the data the admin always finds it hard to keep the track of the conducted seminars, also they are unable to find out that once the seminar is over how did it went or what were people's thoughts on this.

The Latest (fourth) generation is provided with OCR of documents which are a bit complexed mostly because of the text getting all mix up as well as by different symbols of mathematics and etc. There is also a difficulty when there are low quality images or images which are blur. Among the commercial products, postal address readers, and reading aids for the blind are available in the market.

Agnihotri and Dimitrova have proposed an algorithm which uses only the red part of the RGB color space, with the aim to obtain high contrast edges for the frequent text colors. By means of a convolution process with specific masks they first enhance the image and then detect edges. Non-text areas are removed using a preset fixed threshold. Finally, a connected component analysis (eight-pixel neighborhood) is performed on the edge image in order to group neighboring edge pixels to single connected components structures. Then, the detected text candidates undergo another treatment in order to be ready for an OCR.

III. STUDY FINDINGS

Text recognition technology may be applied throughout the entire spectrum of industries, revolutionizing the document management process. This technology enables scan documents to become more than just image files, turning into fully searchable documents with text content that is recognized by computers. With the help of this technology, people no longer need to manually retype important documents when entering them into electronic databases. Instead, Text recognition system extracts relevant information and enters it automatically. The result is accurate, efficient information processing in less time. In the following, we overview some applications of text recognition system.

A. Banking

The uses of image text recognition vary across different fields. One widely known application is in banking, it is used to process checks without human involvement. A check can be inserted into a machine, the writing on it is scanned instantly, and the correct amount of money is transferred. This technology has nearly been perfected for printed checks, and is fairly accurate for handwritten checks as well, though it occasionally requires manual confirmation. Overall, this reduces wait times in many banks.

B. Legal

In the legal industry, there has also been a significant movement to digitize paper documents. In order to save space and eliminate the need to sift through boxes of paper files, documents are being scanned and entered into computer databases. Image text recognition further simplifies the process by making documents text-searchable, so that they are easier to locate and work with once in the database. Legal professionals now have fast, easy access to a huge library of documents in electronic format, which they can find simply by typing in a few keywords.

C.

Image text recognition technology is widely used in many other fields, including education, finance, and government agencies. This technology has made countless texts available online, saving money for students and allowing knowledge to be shared. Invoice imaging applications are used in many businesses to keep track of financial records and prevent a backlog of payments from piling up. In government agencies and independent organizations, image text recognition technology simplifies data collection and analysis, among other processes.

IV. CONCLUSION

Soft Writing is an application in which the OCR (Optical Character Recognition) is used to take the photograph of a filled in form. This form is basically filled by the ones

who attended the seminar and the host or the users will collect their data with the help of this application. Now the this is more of a digitized way rather the original paper work and fill in entry work. The user will simply click and upload the photograph to the website, after then the data is being scanned by the OCR technology that scans the word by word with every single alphabet line by line. Google vision API will simply scan the text with the use of OCR. This data is then upload in the data base. While on the admin side the admin will be able to check the data in date wise as well as name wise and this will come very handy for saving the time. As well as the runtime statistics makes it very easy to understand the progress.

V. ACKNOWLEDGEMENT

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