

# Digital KYC with Auto Form Filling

Kunal Pawar<sup>1</sup>, Pooja Bhabal<sup>2</sup>, Kiran Shinde<sup>3</sup>, Prof. Bhanu Tekwani<sup>4</sup>

<sup>1,2,3</sup>Students of Department of Information Technology, Vidyalkar Institute of Technology, Mumbai, Maharashtra

<sup>4</sup>Prof. of Department of Information Technology, Vidyalkar Institute of Technology, Mumbai, Maharashtra

\*\*\*

**Abstract** - This project implements Digital KYC with auto-form filling which verifies the identity of clients through KYC process and additionally automates the form filling process. The reasons to make sure that their distributors, consultants, and agents are bribery-free and are not involved in any unlawful activities and to further ease the process of KYC. It also ensures that the information provided is real and authentic.

**Key Words:** KYC, auto form filling, bribery-free, web-based software

## 1. INTRODUCTION

This project is a platform for implementing digitalized KYC process with auto-form filling feature in it. In order to facilitate the KYC process, you will need to submit documents which provide customer's Identity proof such as PAN card/ AADHAR.

Once you submit all these documents to the website it will verify those documents. After the documents are verified, you will be notified that your KYC is complete. The traditional way of implementing KYC is a bit tedious and takes long time to complete also it requires a lot of manpower and also may end up having some human faults if not supervised properly. Our aim is to make this KYC process much reliable and smarter by eliminating human's part and letting the software work totally on their behalf. Our software takes documents images and extract related and needful details from them and store the same in a database or simply we could say client's profile. Further we also have added a feature to our project that is Auto Form-filling for customers. Customers do not need to go to an organization to fill any kind of form neither they have to fill it by themselves rather the software itself will add the detailed stored in their profile to the form and submit the same on customer's behalf. This project will be using concept of OCR for extraction Regular Expression for mapping of data and web automation tool for form filling. The main purpose of the project is to make the process of KYC and customer management so easy and smart that customer don't have to get involved in the tedious office work and also the organization can carry on work easily.

## 2. EXISTING METHODS OF KYC

### a. Paper-Based KYC

From the very beginning, the process was practiced in the paper-based documentation system. This system required huge administrative costs and manpower. Moreover, the authority was continuing to find out the discrepancy in the financial statements and the investigation submitted the report that the people are using fake information for the KYC purpose.

### b. Digital KYC

Over a couple of years, digital KYC was introduced in the banking and financial sectors. This method uses a computer system to record all data of an individual to maintain a hassle-free and easy KYC process. Digital KYC is helping the industry to maintain accurate customer data, and regulatory requirements using a central system. But numerous issues like taking a long time for verification, troublesome API integration with the core system, prone to data breaches, and long queue because of ID verification are associated with this method.

### c. Biometric Based KYC

Biometric verification is simple and convenient for the end users and the most secure method of identification. No one can use the biometrics of others and it is almost impossible to forge the biometric data. And the authentication process is very simple to comply with KYC requirements. It eliminates the difficulties of compliance, record keeping, and repetitive document scanning. At the same time, seamless integration enables this method to work with the core system.

## 3. PROPOSED TECHNIQUE

In figure 3.1 the left flow chart demonstrates the extraction of details from the documents and the right flow chart demonstrates the Auto-Form Filling process. The project extracts the necessary details of the customers from the documents and stores it securely in its profile this is done using OCR technique also those details are used to auto fill any digital form of the given organization on customer's behalf by mapping every details stored on the customers database to the related attribute on the form. As if the customer itself is filling it.

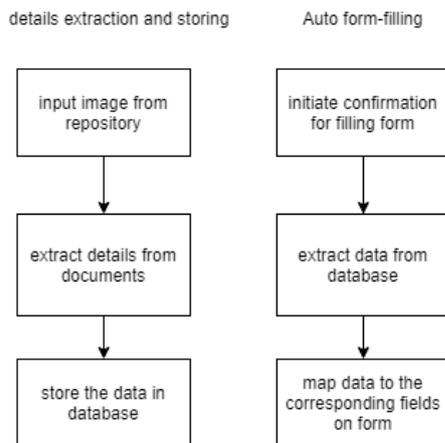


Figure 3.1

Here we have two different modules depicted in above block diagram.

Detail extraction and storing:

- Step 1: Input image from any repository is taken as an input.
- Step 2: Those images taken is processed to extract necessary and required details from it.
- Step 3: Extracted details are further stored in the database on the server in respective customer’s profile.

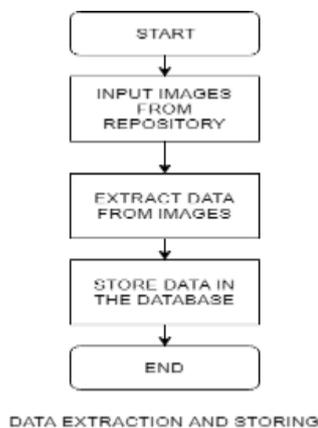


Figure 3.2

Auto form-filling:

- Step 1: User initiate to confirm the filling of a web-based form.
- Step 2: Data from the corresponding user is extracted from the customer’s profile.
- Step 3: The data extracted from the database is mapped to the corresponding fields on the form.

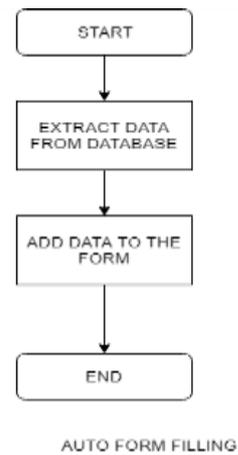


Figure 3.3

#### 4. METHODOLOGY

The project is has two separate module data extraction and auto form filling. In the first part of the project of extraction details the user have to submit the documents to the website by cropping the document respectively. Once the user clicks submit the data from the documents are extracted and displayed of the screen for the user to validate. The Extraction of data from the documents is done using OCR technique for which the project uses python library pytesseract. The extracted data from the images is further mapped to their respective fields this is done using the concept of Regular Expression. Further the user has been given an option to fill the form once the user clicks on it he gets notified that he has successfully filled the required form and the user gets a secured email about confirmation of the form filled with all his data. This Automation of form filling is implemented using python library Selenium which Automates web.

#### 5. RESULT



Figure 5.1

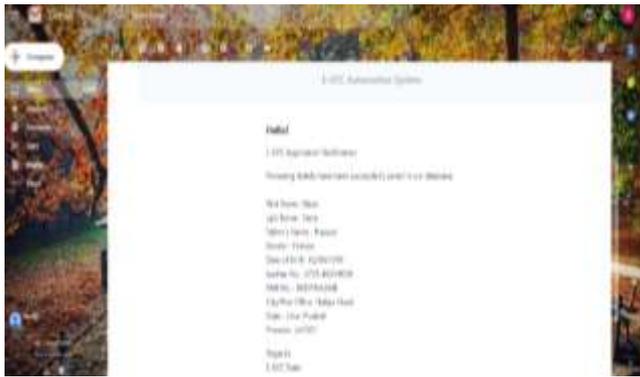


Figure 5.2

5. Image to Text Processing.  
<https://www.youtube.com/watch?v=-SjiMaAF2nU>

6. Dhanawade Komal P, Dhamal Pratiksha H, Jagtap Siddesh S, Jagtap Suraj S, "Use of OCR for multiple Form Filling System", IJSRD- International Journal of Scientific Research and Development | Vol. 4, Issue 11, 2016 | ISSN (online): 2321-0613.

## 6. CONCLUSION

The traditional way of entering data into a computer is through the keyboard. However, this is not always the best nor the most efficient solution. The purpose of this system is to develop a new KYC system which provides an ease of KYC with just a click and also implements the auto-form filling with user data accurately mapped to the form. Nowadays, a lot of documents are produced in paper form but it is obvious that automatic data recognition systems are very popular. The document is repeatedly copied and changed during subsequent processing steps, so it exists in many different copies. In some applications they can successfully help humans, but in some cases they are useless. The aim of this system is the successful entry of data into the form by accurately mapping every user details to the form field from the database without seriously damaging the data quality using OCR technology.

## 7. REFERENCES

1. Prakash Chandra Mondal, Rupam Deb, Mohammad Nurul Huda, "Transaction authorization from Know Your Customer (KYC) Information in Online Banking", 2016 9th International Conference on Electrical and Computer Engineering (ICECE).
2. Prakash Chandra Mondal, Rupam Deb, Mohammad Nurul Huda, "Know your customer (KYC) Based Authentication Method for Financial Services through the Internet", 2016 19th International Conference on Computer and Information Technology (ICCIT).
3. Prakash Chandra Mondal, Rupam Deb, Mohammad Nurul Huda, "Transaction Authorization from Know Your Customer (KYC) Information in Online Banking", 2016 9th International Conference on Electrical and Computer Engineering (ICECE).
4. Lin Woan Ning, Yap Keem Siah, M. Khalid, M. Yusof, "Design of an Automated Data Entry System for Hand-Filled Forms", 2000 TENCON Proceedings. Intelligent Systems and Technologies for the New Millennium (Cat. No.00CH37119).