TECH MARVELS

FUNCTIONAL DOCUMENTS

1. Proposed Solution:

- Our objective is to create an interactive mobile application where we will be providing a scanning feature for the cheque which the account holder can scan to submit the cheque.
- The most peculiar feature of our application will be that the cheque will be automatically cleared after all the Identifications and Validations.
- We will be creating a chatbot which will guide the user if they have any queries regarding the cheque processing, and when the cheque will be cleared the chatbot will notify the user.
- Also, we will be adding a feature which will explain all the features of the application using the hand gestures and a short video tour.

2. Methodology:

- The Automatic cheque verification feature require fulfilment of some key stages in sequential manner. At first, the tool will verify the cheque number to ensure whether the cheque is from the set of cheque leaflets assigned to the account holder or not.
- After that, amount will be verified by checking whether the customer is having sufficient amount in his account for which he will release the cheque, and finally the signature of the cheque issuer(s) will be verified.
- The entire process of cheque clearance will happen in a sequential manner and each step is mandatory for the next step. All the key features presented in the cheque verification are:
- Language Identification, IFSC code, Account number, Cheque number, Legal amount, Courtesy amount, Signature.
- To extract information from the machine typographic script, we will use OCR method as it tends to produce results with higher level of accuracy whereas for hand-written words and numerical values, we will use deep learning ICR. Similarly, for authenticating the signature(s), we will extract the features using SURF algorithm and for classification, MOBINET will produce optimum results with low bandwidth and low memory consumption. To implement these methods, we required noise free image therefore better idea is to segment the image so as to acquire only the relevant information.

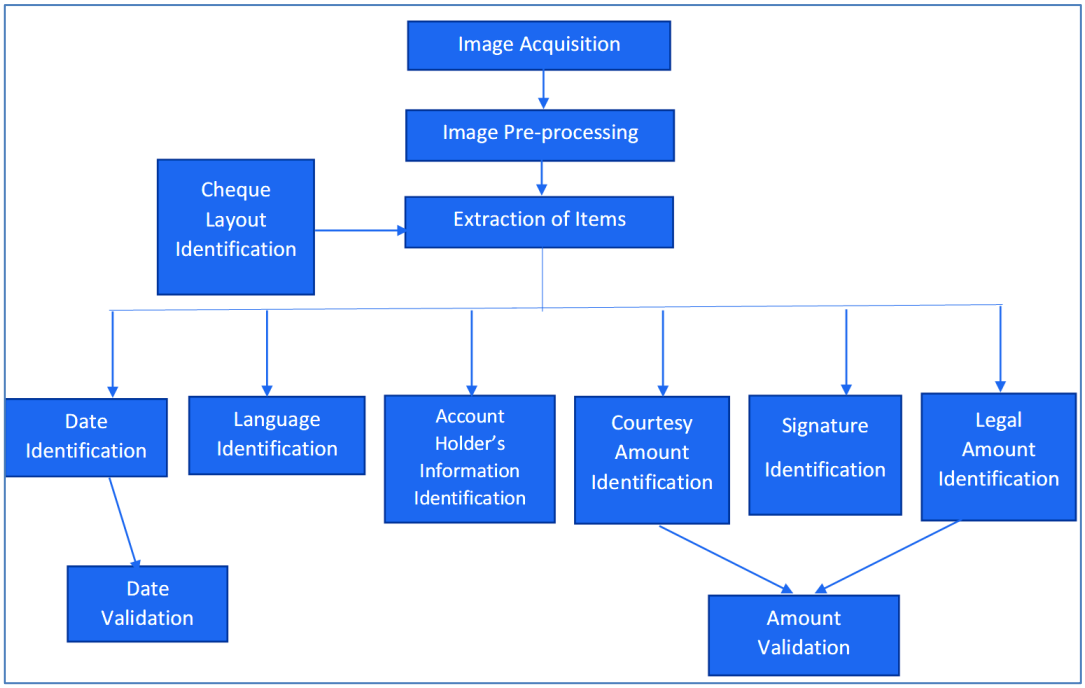

Figure 1: Process flow diagram

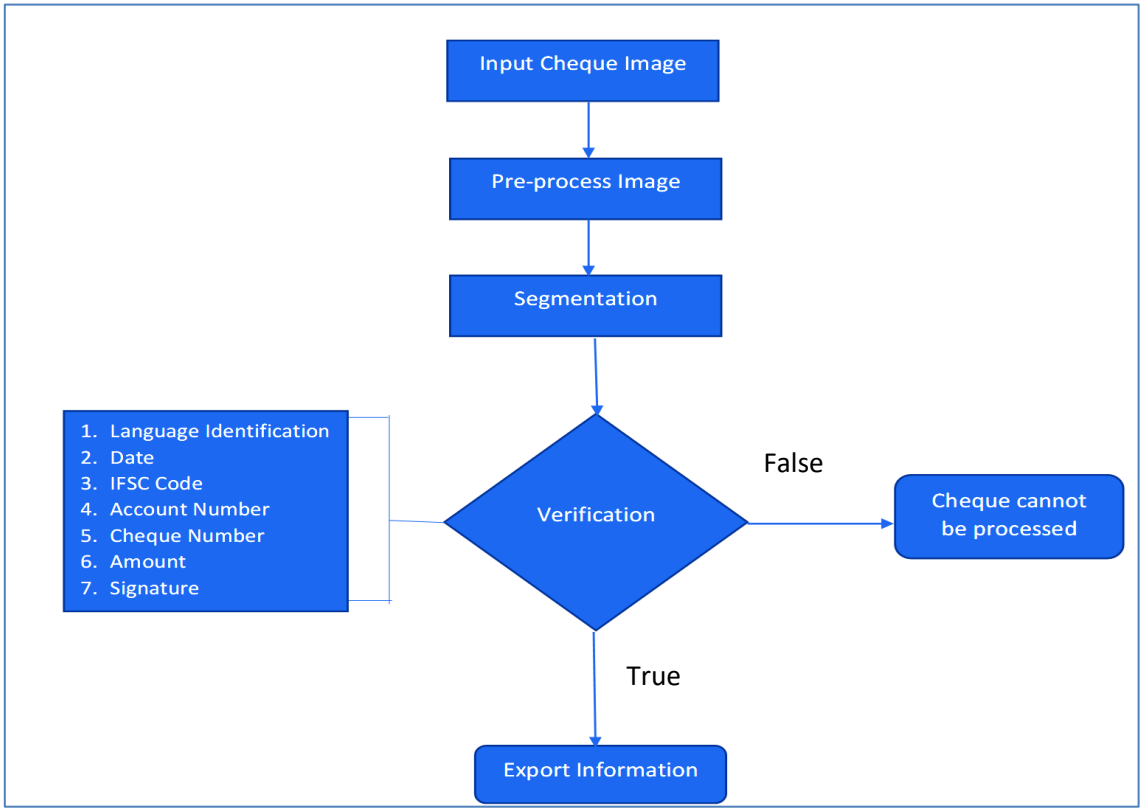

Figure 2: The entire methodology for bank cheque verification is summarized

3. Architecture:

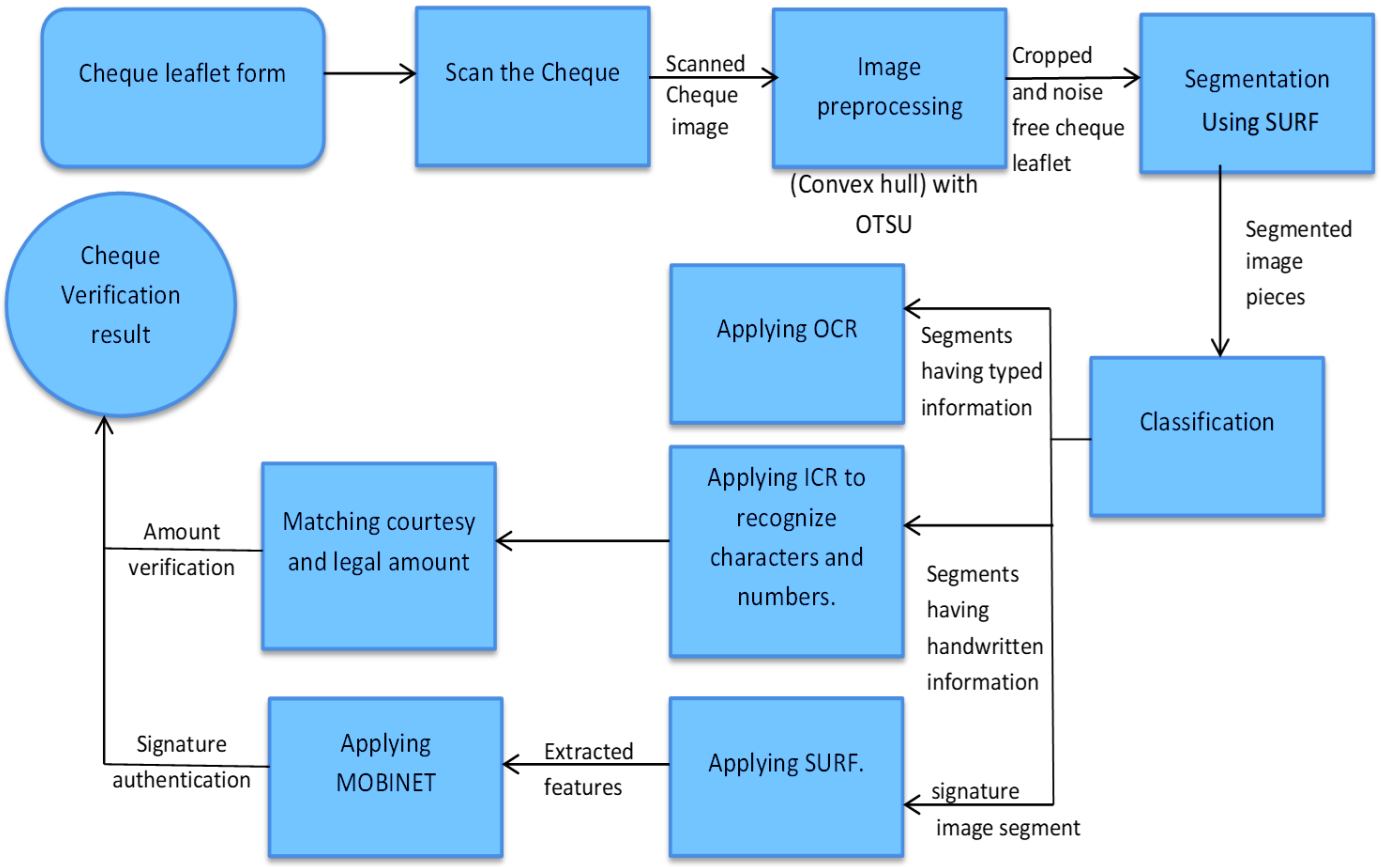

Figure 3:Architecture for Automatic cheque processing

4. Scalability:

- This project is scalable in all sectors when we have increasing workload or scope.