बैंक ऑफ़ बड़ौदा
Bank of Baroda

Technology Partner
Microsoft Azure

Bank of Baroda Hackathon - 2022

Your Team Name : MNI

Your team bio :Experienced solution architect with exp of 15+ years

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TIMES INTERNET

Problem Statement?

Bank handles large volumes of cheques in the clearing process. The process involves many technical verifications including signature verification. Some of these steps are manual and require human intervention to complete the process. The current process requires the high human capital deployment and longer processing time.

I have selected this problem statement as I have good experience of Image processing and form reorganisation using Azure AI services. I will be able to build perfect solution needed for this problem statement

User Segment & Pain Points

User Segments:

1. Upload the cheque to the system(For POC/Demo only)
2. Display cheque verification result on UI

Pain Points

1. Accuracy of Signature verification:- will work better when we process huge number of files. The accuracy of any AI based application increases with the increase in data

Pre-Requisite

1. Azure AI services account

Azure tools or resources

1. Azure Form Recognizer service
2. Form Recognizer Studio
3. Azure Blob for storing training data
4. Azure Web App for hosting API

Any Supporting Functional Documents

Solution:- Using Azure Custom Form Recogniser to extract the key value pairs and the signature from the Cheques. This can be performed in following Steps

Step 1- Label the Data:- In this step we will use the Images/PDF/Scanned copies of the Cheques and train our model to detect the files like Payee, Date, Account Number, Name, Signed, Bank etc. Make sure while labelling you will include as many different format as you can

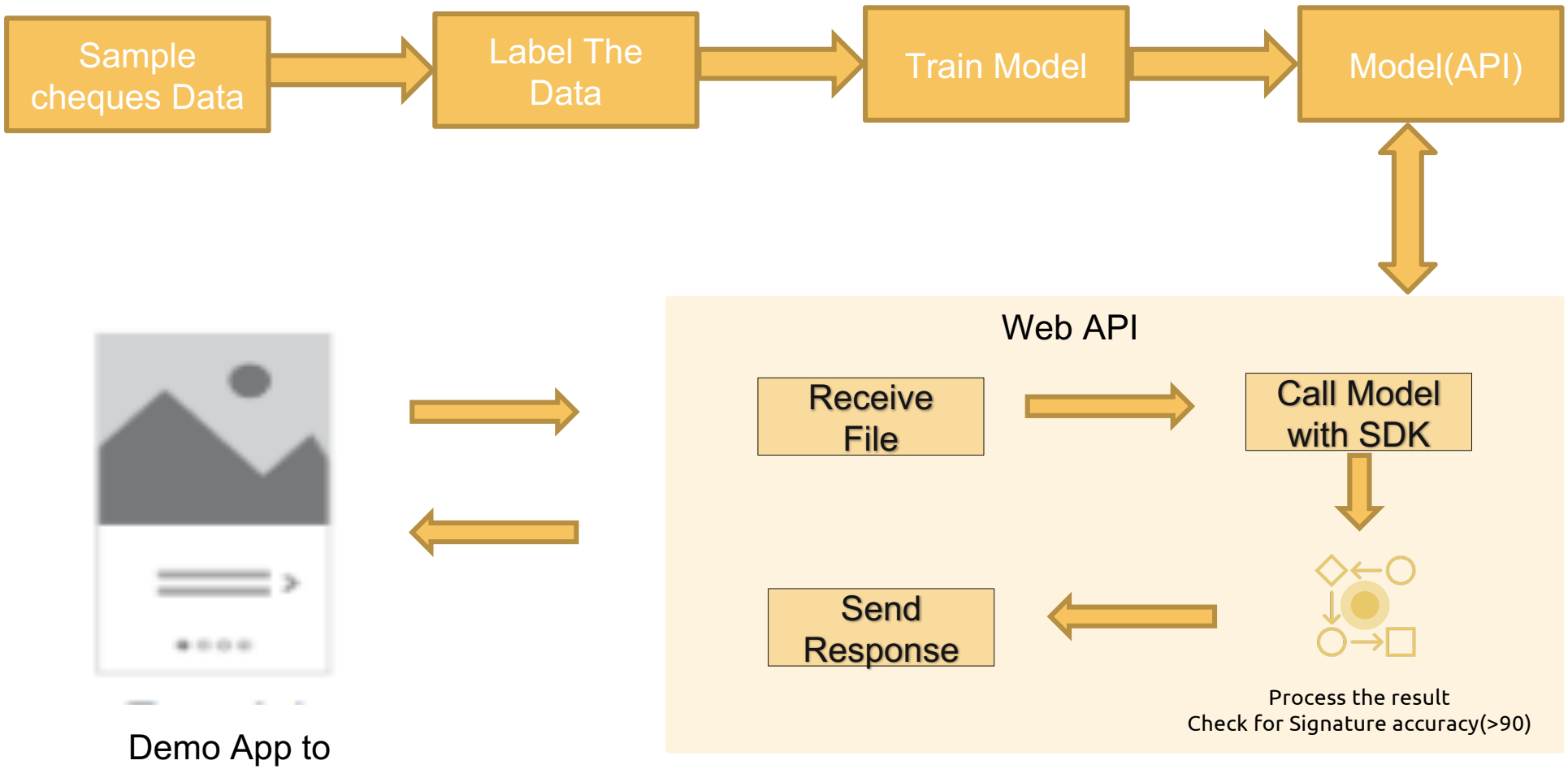
Step 2- Train the Model:- : Run the model with as big dataset as possible. Bigger the dataset better the result

Step 3- Test your Model:- Test few cheques to see the result. If the accuracy is below 90% then use more sample data to label and train

Step 4- Create API:- As end solution I will create Web API using .Net core, this API will use SDK to call the trained Model and get result. The API will verify the result from trained model and response. The purpose of doing it API so that Bank can integrate this API in current applications they have

Step 5- DemoAPP:- For demo purpose I will create Microsoft power app application where user can upload the cheques and see if its correct or not and also other details. We can also use the PowerApps to build bot which can point to folder and process the bulk cheques

Any Supporting Functional Documents



Key Differentiators & Adoption Plan

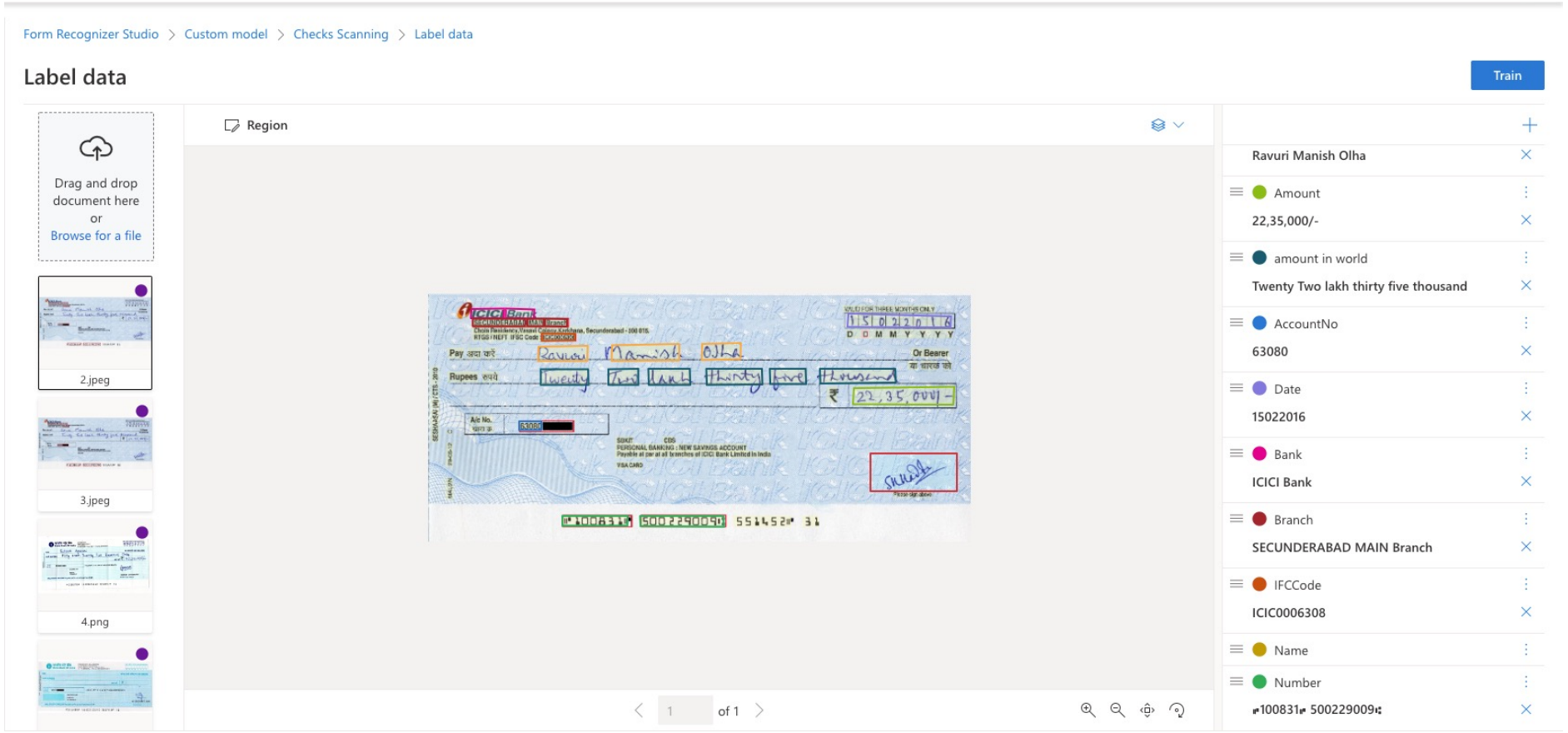
1) My solution is different as I will be making which can be integrated with other bank applications

2) Using power apps bot so that we can process multiple files at a same time

Adoption Plan 1:- Consume the API in any Bank application which is already running and se the results

Adoption Plan 2:- All the cheques can be dropped at one blob location then Power app can pick these files process them and send/Store the data in Application needed

GitHub Repository Link & supporting diagrams, screenshots, if any



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Thank You

Team member names