

AI Parichay API

30th January 2021

NIC – HQ Team

About AI Parichay

AI Parichay is an API that is intended for verification of the user's identity by extracting the 'Personally Identifiable Information' (PII) details from various types of ID Cards such as Aadhaar Card, PAN Card, Voter ID Card etc. using Artificial Intelligence (AI).

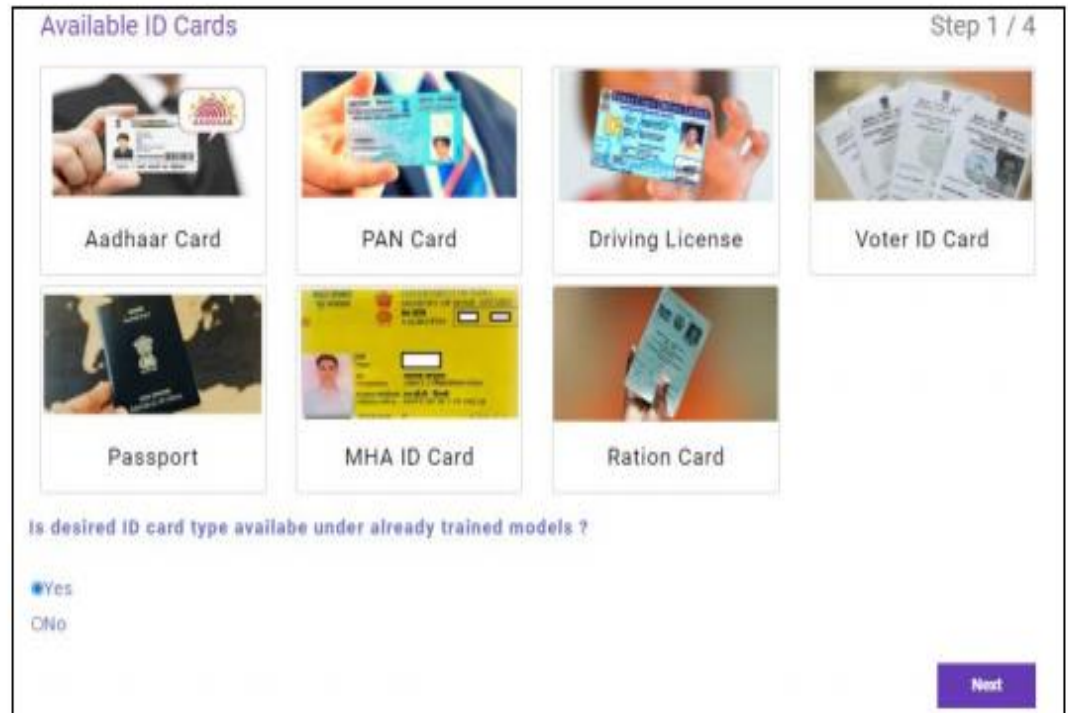
The API will extract ID Card details such as ID card no., ID card holder's name, DOB, age, validity, and photo of the ID card holder etc. from the uploaded ID card.

AI Parichay API is deployed on DGX Server which can be accessed using the (http://10.197.112.27:11000/IdClassify_ditect/)

Scope

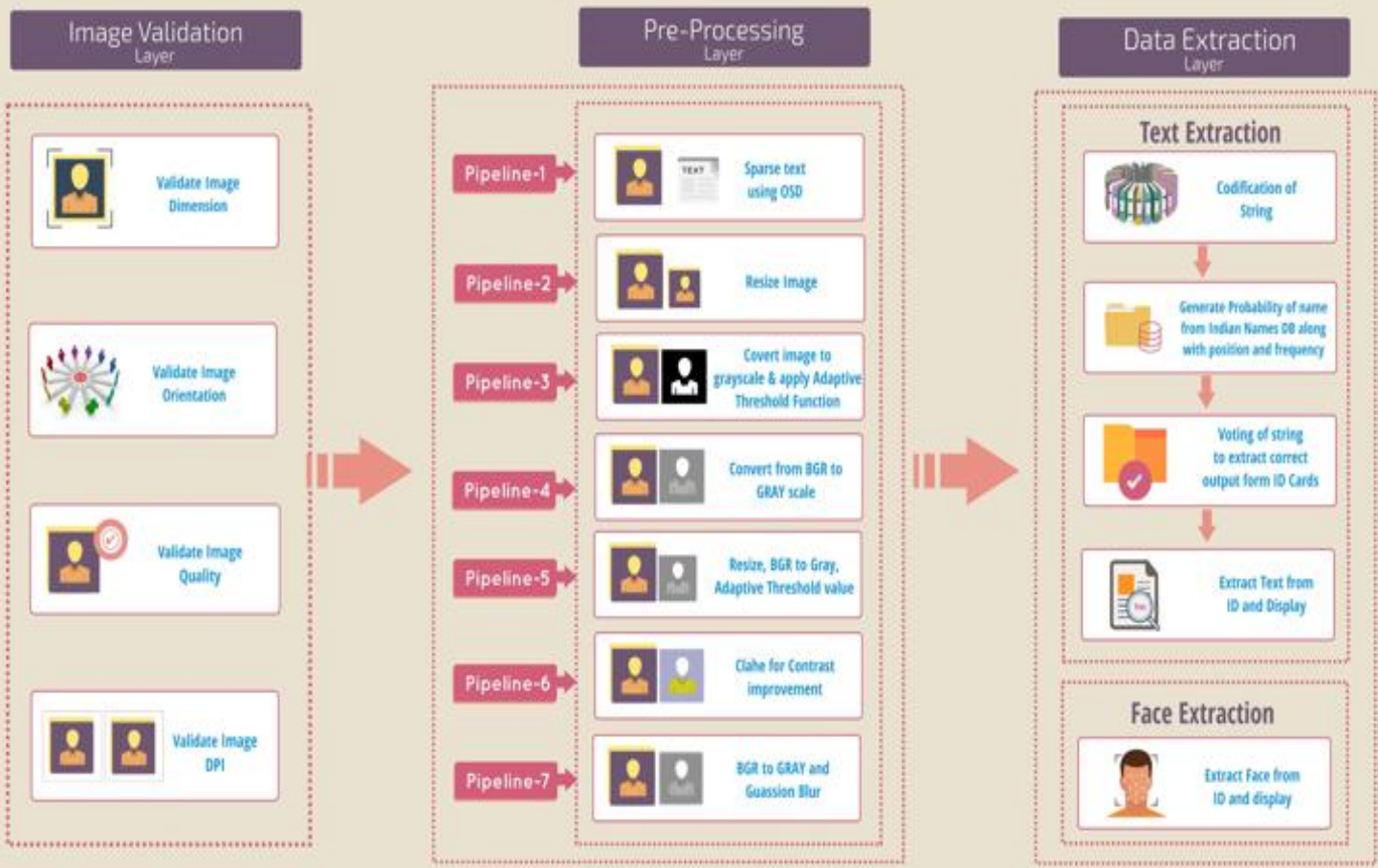
Currently, the API is trained for below seven types of ID Card

1. Aadhaar Card
2. PAN Card
3. Voter ID Card
4. Driving License
5. MHA
6. Passport
7. Ration Card



AI Parichay Architecture

AI Parichay Architecture



Technologies and Libraries Used

Technology used –

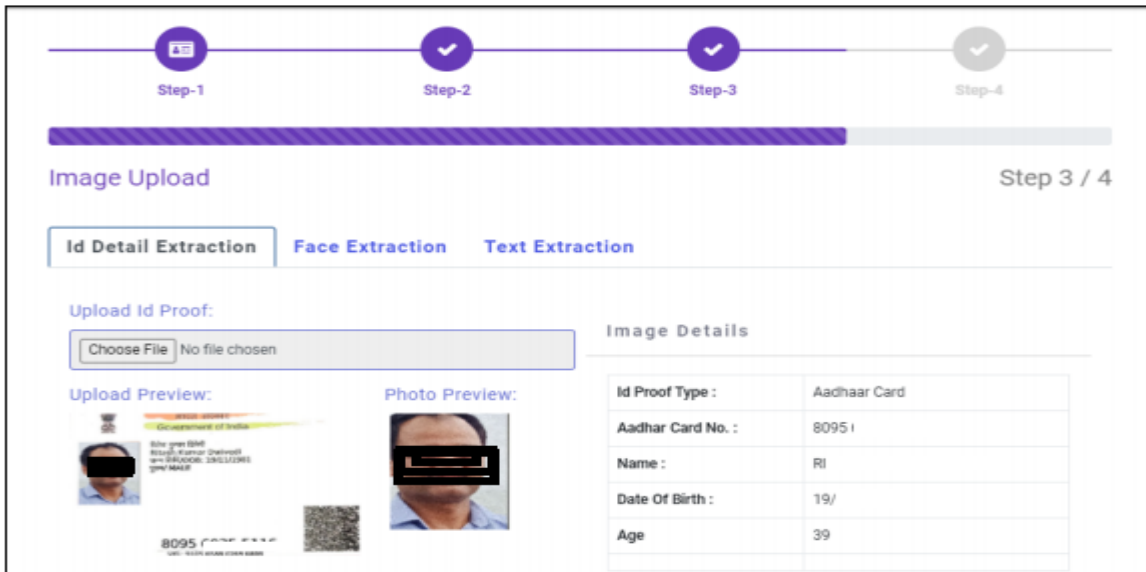
- Python API using Flask

Libraries used –

- Python,
- OpenCV,
- PyTesseract,
- numpy,
- Pillow
- OCR etc.

API Accuracy

Parameters	Aadhaar	PAN	Voter ID	MHA	DL
Sample Size	18	7	8	6	8
Accuracy	95%	98%	88%	92%	88%



Step-1 Step-2 Step-3 Step-4

Image Upload Step 3 / 4

Id Detail Extraction Face Extraction Text Extraction

Upload Id Proof: Choose File No file chosen

Upload Preview: Photo Preview:

8095

Image Details	
Id Proof Type :	Aadhaar Card
Aadhar Card No. :	8095 1
Name :	RI
Date Of Birth :	19/
Age	39

About ID Verify Service Platform Application

We have also developed ID Verify Service Platform application which utilize the 'AI Parichay' API for ID Card Verification and testing of ID Cards on already trained ID Card types such as Aadhaar, PAN, Voter ID etc. using 'Test AI Model' as well as help user in training AI Model on new ID Card type using 'Train AI Model'.

The URL for accessing the application is

<https://idverify.nic.in/AIPlatform2/default.aspx>

Use-cases for NIC's existing Applications

E-Counselling - AI Parichay Service can be used for verification of the candidate applying for admission process on online application form



NSP Application - AI Parichay Service can be used for verification of Candidate's identity while applying for e-Scholarship application through the online Portal



E-Passport - AI Parichay Service can be used by e-Passport application for verification of user's identity based on uploaded ID Card



E-Visitor - AI Parichay Service can be used to perform visual search by capturing the photo of the visitor and searching the existence in visitor record for e-Visitor project



Proposed Services for integration with AI-as-a-Service Platform

API Services	Service Details	Potential Use-Case
Visual Search Service	This service can help to search the photo of face from various photos/videos data using Face Recognition Technology	Visual Search can be performed on the photo captured/uploaded on an online application form to match with database
De-duplication based on photo	De-duplication service can assist in identification of duplicity in face photo dataset using Face Recognition Technology	De-duplicity can be checked while filling of application form by same candidate
Phonetic Recognition	This service can help in identification and recognition of similar words using phonetics and deep learning	Recognition of ID Card types using phonetics for e.g. Aadhaar, Adhar, Adhaar etc. can be recognized

Team Members

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THANK YOU