**MINI PROJECT #02**

**INTERNSHIP**

# PROJECT REPORT
# IMAGE PROCESSING

By:

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# IMAGE PROCESSING

## ➢ INTRODUCTION:

In this project I am implementing:

- Image Cropping
- Image Rotation
- Image Brightness
- Image Filters
- Mirror Image
- Flip Image
- Image Scanning
- Text Extraction from Image in multi_languages (Eng, Urdu, Arabic, Chinese, French, German and Turkish)
- Text to Speech conversion in multi_languages (Eng, Urdu, Arabic, Chinese, French, German and Turkish).
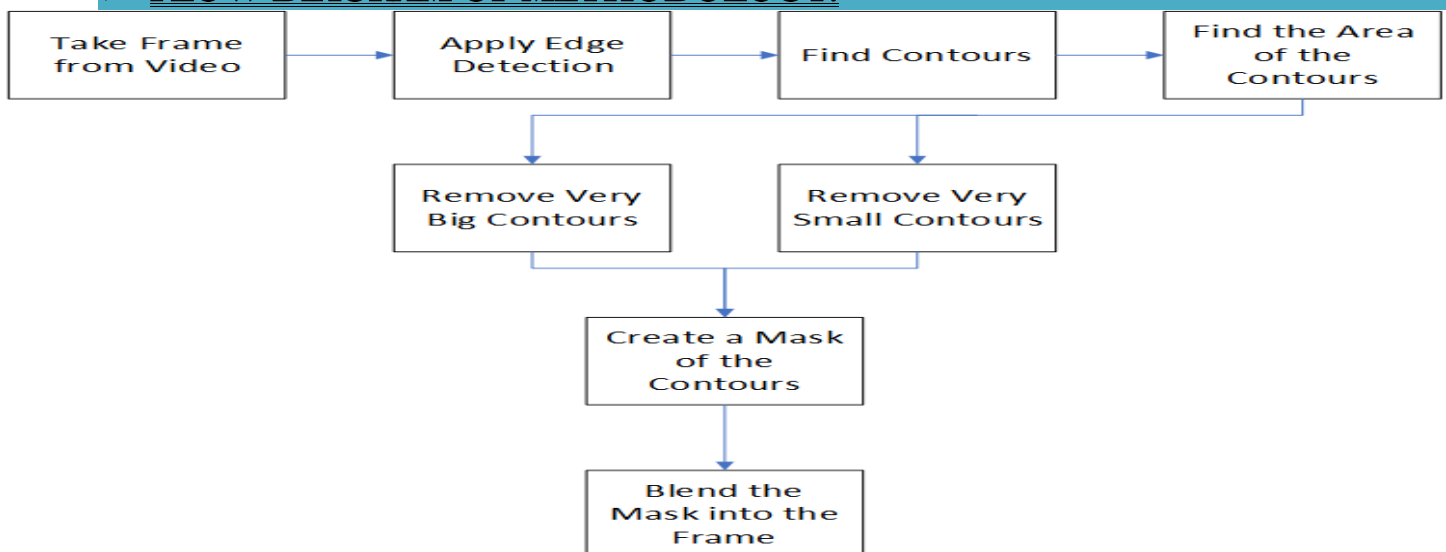
## ➢ PROPOSED SOLUTION:

I am using:

- open-cv for Image scanning.
- Pytesseract for text extraction
- Google Translator for text to speech conversion
- PIL for image editing tasks like cropping, mirroring and flipping

## 1. DIAGRAMS:

### ➢ FLOW DIAGRAM OF METHODOLOGY:

```
Take Frame      →   Apply Edge      →   Find Contours   →   Find the Area
from Video          Detection                               of the
                                                            Contours
                          ↓                                     ↓
                    Remove Very          Remove Very
                    Big Contours         Small Contours
                          ↓                     ↓
                         Create a Mask
                         of the
                         Contours
                              ↓
                         Blend the
                         Mask into the
                         Frame
```
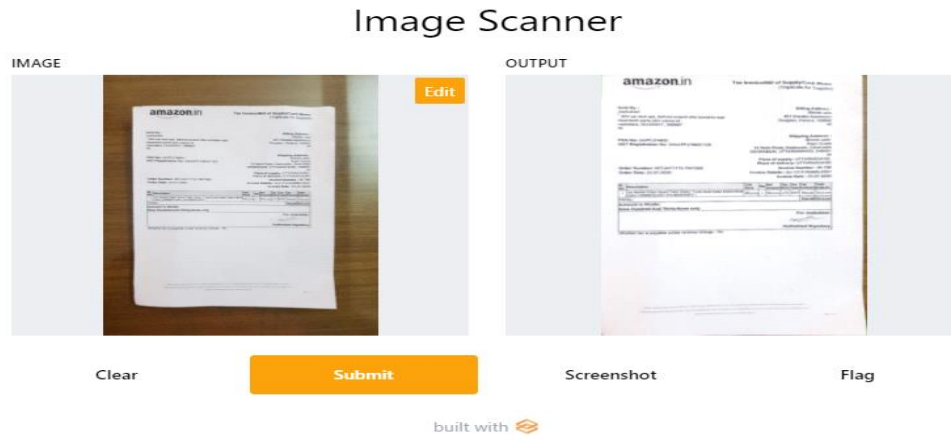
- **GUI:**
- **08-10-2021**

# IMAGE PROCESSER

This project will do the following tasks:

- Scanning of Image



- Extracting Text from Image

```
'Sold By: Billing z
ig Address :
veybukket Shirish upta
304 sai stui pt, behind anand vila complex opp 401 Sheeba Aparmonts
dwarkesh party plot vasna rd Gurgaon, Harana, 122002
\vadodara, GUJARAT, 390007 IN
IN
Shipping Address =
PAN No: AAPFI74826 'Shinsh upta
GST Registration No: 24AAPRUTAS2C126 Rajni Gupta
45 Nemi Road, Dalanwala, Dalanwala
DEHRADUN, UTTARAKHAND, 242001
1
Place of supply: UTTARAKHAND
Place of delivery: UTTARAKHAND
Order Number: 407-2471172-7047550 Invoice Number: 1N-798
Order Date: 23.07.2020 Invoice Details : G/-1912162665-2021
Invoice Date : 23.07.2020
fboe a [Unie Net Tax ffax [fax [Total
Ino Description [price [2 lAmountiRate [Type |AmountiAmount |
1 eee aay Sr aie Sa, oe BUGS EEN Mego 4 syne tft] tons] 033.00
FFoTAL: Toondftorz00
Tamount in Words:

line Hundred And Thirty-three only


For Joybukket:
a


Authorized Signatory




'Whether taxis payable under reverse charge - No
```

- Converting Text into Audio File

☐ 🗎 speech.mp3

☐ 🗎 speech.wav

## 2. 10-08-2021

## 3. Converting Extracted text into multiple Languages and storing as Audio

```
Please select Language for Translate...
1. English
2. Arabic
3. Chinese
4. French
5. German
6. Turkish
7. Urdu
8. Hindi
9. Japanese
7
Urdu Selected
ur
سوال # 09:
تمام گاہکوں / خریداروں کو مناسب حکم میں شناخت کریں جس میں انہیں ابتدائی طور پر پیروی کرنا چاہئے؟
ان سب کو ان کسٹمر / خریداروں کی طرف سے کارکردگی کا مظاہرہ کرنے والے تفصیلی اور سرگرمیوں میں کیا بیان کیا جانا چاہئے.

(نشان 10)
```

```python
[40]: from gtts import gTTS
      import os
      language = 'ur'
      speech = gTTS(translated_text.text, lang = language, slow = False)
      speech.save(language+".mp3")
```

```python
[41]: os.system("start ur.mp3")
```
```
t[41]: 0
```

## 4. 11-08-2021 / 12-08-2021

## 5. Another GUI: