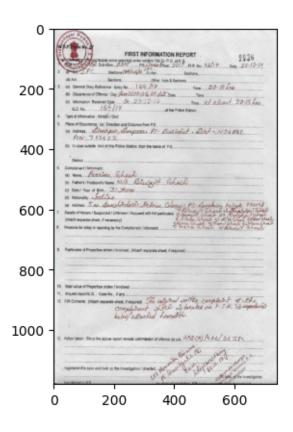
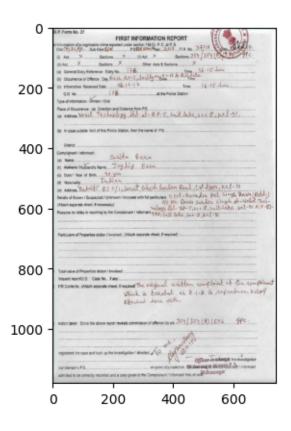
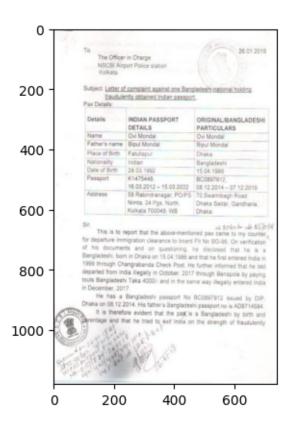
# fir

### March 17, 2024

```
[]: from google.colab import drive
     drive.mount('/content/drive')
     dataset_path="/content/drive/MyDrive/FIR_Image_Dataset/FIR_images_v1"
    Drive already mounted at /content/drive; to attempt to forcibly remount, call
    drive.mount("/content/drive", force_remount=True).
[]: import os
     import cv2
     import matplotlib.pyplot as plt
[]: sample_images = os.listdir(dataset_path)[:]
[]: len(sample_images)
[]: 569
    Image preprocessing
    Image resizing
[]: for img_name in sample_images[:]:
         img_path = os.path.join(dataset_path, img_name)
         img = cv2.imread(img_path)
         img_resized = cv2.resize(img, (1000, 700))
         cv2.imwrite(img_path, img_resized)
     print("All images successfully resized to 1000x700 pixels")
    All images successfully resized to 1000x700 pixels
[]: for img_name in sample_images[:3]:
       img_path=os.path.join(dataset_path,img_name)
       img=cv2.imread(img_path)
       plt.imshow(img)
       plt.show()
```







## Image conversion to RGB

```
for img_name in sample_images[:]:
    img_path = os.path.join(dataset_path, img_name)
    img = cv2.imread(img_path)
    rgb_img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)
    cv2.imwrite(img_path, rgb_img)

print("All images successfully converted to rgb")
```

## All images successfully converted to rgb

```
[]: for img_name in sample_images[:3]:
    img_path = os.path.join(dataset_path, img_name)
    img = cv2.imread(img_path)
    if img.ndim==3 and img.shape[2]==3:
        print("RGB format")
    else:
        print("Not RGB")
```

```
RGB format
RGB format
```

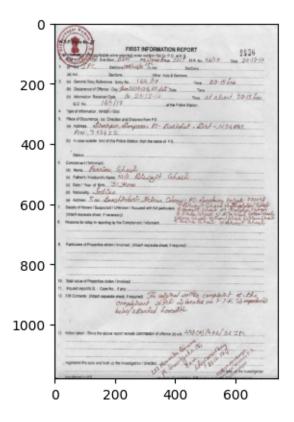
Noise reduction

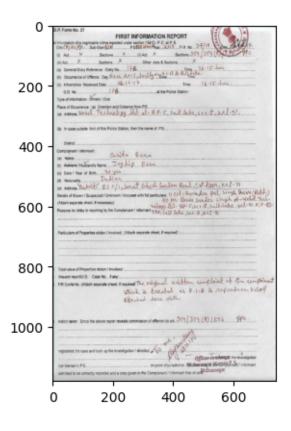
```
[]: for img_name in sample_images[:]:
    img_path = os.path.join(dataset_path, img_name)
    img = cv2.imread(img_path)
    blur_img = cv2.GaussianBlur(img, (5,5),0)
    cv2.imwrite(img_path, blur_img)

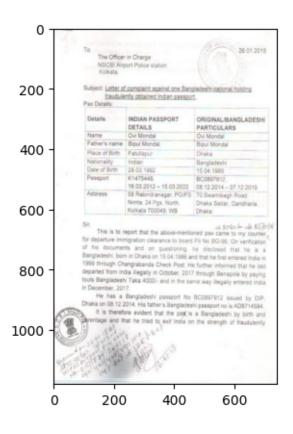
print("All images successfully blurred")
```

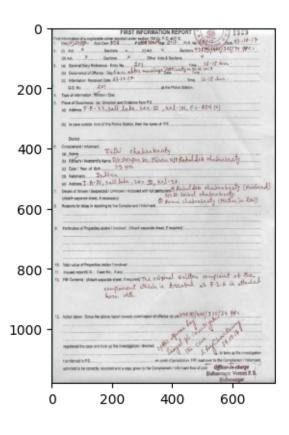
All images successfully blurred

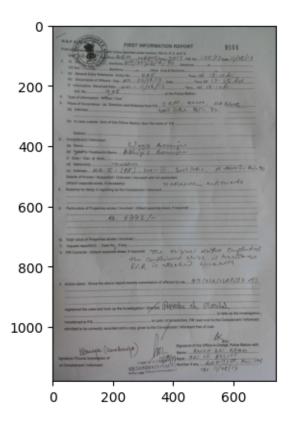
```
[]: for img_name in sample_images[:5]:
    img_path = os.path.join(dataset_path, img_name)
    img = cv2.imread(img_path)
    plt.imshow(img)
    plt.show()
```











# Text Extraction

# ]: |pip install pytesseract

Requirement already satisfied: pytesseract in /usr/local/lib/python3.10/dist-packages (0.3.10)

Requirement already satisfied: packaging>=21.3 in

/usr/local/lib/python3.10/dist-packages (from pytesseract) (24.0)

Requirement already satisfied: Pillow>=8.0.0 in /usr/local/lib/python3.10/dist-packages (from pytesseract) (9.4.0)

# []: sudo apt-get install tesseract-ocr

Reading package lists... Done

Building dependency tree... Done

Reading state information... Done

The following additional packages will be installed:

tesseract-ocr-eng tesseract-ocr-osd

The following NEW packages will be installed:

tesseract-ocr tesseract-ocr-eng tesseract-ocr-osd

O upgraded, 3 newly installed, 0 to remove and 38 not upgraded.

Need to get 4,816 kB of archives.

After this operation, 15.6 MB of additional disk space will be used.

```
all 1:4.00~git30-7274cfa-1.1 [1,591 kB]
    Get:2 http://archive.ubuntu.com/ubuntu jammy/universe amd64 tesseract-ocr-osd
    all 1:4.00~git30-7274cfa-1.1 [2,990 kB]
    Get:3 http://archive.ubuntu.com/ubuntu jammy/universe amd64 tesseract-ocr amd64
    4.1.1-2.1build1 [236 kB]
    Fetched 4,816 kB in 2s (2,747 \text{ kB/s})
    debconf: unable to initialize frontend: Dialog
    debconf: (No usable dialog-like program is installed, so the dialog based
    frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 78,
    <> line 3.)
    debconf: falling back to frontend: Readline
    debconf: unable to initialize frontend: Readline
    debconf: (This frontend requires a controlling tty.)
    debconf: falling back to frontend: Teletype
    dpkg-preconfigure: unable to re-open stdin:
    Selecting previously unselected package tesseract-ocr-eng.
    (Reading database ... 121752 files and directories currently installed.)
    Preparing to unpack .../tesseract-ocr-eng_1%3a4.00~git30-7274cfa-1.1_all.deb ...
    Unpacking tesseract-ocr-eng (1:4.00~git30-7274cfa-1.1) ...
    Selecting previously unselected package tesseract-ocr-osd.
    Preparing to unpack .../tesseract-ocr-osd 1%3a4.00~git30-7274cfa-1.1 all.deb ...
    Unpacking tesseract-ocr-osd (1:4.00~git30-7274cfa-1.1) ...
    Selecting previously unselected package tesseract-ocr.
    Preparing to unpack .../tesseract-ocr_4.1.1-2.1build1_amd64.deb ...
    Unpacking tesseract-ocr (4.1.1-2.1build1) ...
    Setting up tesseract-ocr-eng (1:4.00~git30-7274cfa-1.1) ...
    Setting up tesseract-ocr-osd (1:4.00~git30-7274cfa-1.1) ...
    Setting up tesseract-ocr (4.1.1-2.1build1) ...
    Processing triggers for man-db (2.10.2-1) ...
[]: import pytesseract
     extracted_text_dict = {}
     for img_name in sample_images[:10]:
         img_path = os.path.join(dataset_path, img_name)
         img = cv2.imread(img_path)
         extracted text = pytesseract.image to string(img)
         extracted_text_dict[img_name] = extracted_text
     print("\nExtracted Text Dictionary:")
     for img_name, extracted_text in extracted_text_dict.items():
         print(f"Image: {img_name}")
         print(f"Extracted Text: {extracted_text}\n")
```

Get:1 http://archive.ubuntu.com/ubuntu jammy/universe amd64 tesseract-ocr-eng

Extracted Text Dictionary:

Image: Women PSWOMEN-0036-2017-4052\_\_1.jpg
Extracted Text:

FIRST INFORMATION REPORT 0936

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- (6) Information Received Date... Ak. LOL DIE oi Time...ad alided.2015 hap...

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- (0) Date! Year of Birth.. Soka :
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required)
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Image: Women PSWOMEN-0037-2017-4234__1.jpg
Extracted Text:
B.P. Form No. 27
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FIRST INFORMATION REPORT

Information of cognizable crime reported under section 154 Cr. P.C. at Dist. 11) 24 7}... Sub-Divn BD! ADH. We

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- (0) In case outside limit of this Police Station, then the name of PS.

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.at the Police Station :

PS...

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Complainant / informant

- (2) Name, an
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Image: NSCBI Airport PSNSCBI-AIRPORT-0005-2018-5904\_\_1.jpg
Extracted Text:

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-\_. 26.01.2018

To
The Officer in Charge
NSCBI Airport Police station
Kolkata, \

INDIAN PASSPORT ORIGINAL/BANGLADESHI
DETAILS PARTICULARS
(Ovi Mondai (Ovi Mondal
Father's name | Bipul Bipul Mondal
Place of Birth | Fatullapur = = | Dhaka
Nationality | indian Bangladeshi
| Date of Birth | 28.03.1902 986

Passport Ki475448, Bcoss7912,---CS~<"<CS\*S 1 18.03.2022 08.12.2014 - 07.12.2019

----}

"Address 5 agar, PO/PS 70. Swamibagh Road Nimta, 24 Pgs, North, Dhaka Sadar, Gandharia, | Kolkata 700049, WB Dhaka |

Sir, ch Leto be cle A508

This is to report that the above-mentioned Pax came to my counter A for departure immigration clearance to board Fit No BG-96, On verification of his documents and on Questioning, he disclosed that he is a Bangladeshi, born in Dhaka on 15.04.1986 and that he first entered India in 1999 through Changrabanda Check Post. He further informed that he last departed from India illegally in October, 2017 through Benapole by paying touts Bangladeshi Taka 4000/- and in the same way illegally entered India in December, 2017

He has a Bangladeshi passport No BC0897912 issued by DIP, Dhaka on 08.12.2014. His father's Bangladeshi Passport no is AD8714584. It is therefore evident that the pax is a Bangladeshi by birth and Parentage and that he tried al india on the strength of fraudulently

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Image: Women PSWOMEN-0029-2017-5241\_\_1.jpg
Extracted Text:

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District. 'Complainant Informant: (a) Name.
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informant free of cost < Officer-in-charge i"</pre>
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Image: Bidhannagar South PSBDN-SOUTH-0135-2017-2524__1.jpg
Extracted Text:
FIRST INFORMATION REPORT 9586
rime reported under section 184 Gr. PC. at PS.
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Particulars of Properties stolen / involved ; (Attach separate sheet, if required)

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Image: NSCBI Airport PSNSCBI-AIRPORT-0006-2018-5162\_\_1.jpg

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"3320 6139 7172" in the name of "ABDUR RAHMAN"

port No: BAQ012385 indian visa no. VJ8186765 in the on. elder brother of the ABDUR RAHMAN)

11D No. 1913328452796 in the name of Md Moidul Ali SN)

11D in the name of Lal Banu (Relation: Mother of the

2001 of Bangladesh Madrasah Education Board, Dhaka angladesh bearing No: 1913328452834 in the name of

5 itl

(MATIUR RAHAMAN: (immigration Officer) S/o. Lt. SER MD SK 237 AJC BOSE ROAD, PS BHAWANI PUR, KOLKATA-700020 PHONE: 03325691101 (Complainant).

1 se" Ae
2 shri Gobinda Thakuria
(immigration Officer)

t Slo Lt. Jogesh Chandra Das 237 AJC BOSE ROAD, PS BHAWANI PUR, KOLKATA-700020 PHONE: 03325691101

Image: Cyber-Crime PS51-21\_\_1.jpg

Extracted Text:

FIRST INFORMATION REPORT \

1 reported under section 184 Cr. P.C. at PS. 334

W.B.P. Form No.

First information of

(Ret Sections. Chip act\_1P.C\_sections... 419.490 {1206 - iy Act. Other Acts & Sections...

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- $\verb||. Details of Known/Suspected/Unknown/Accused with ullpariculars Yn ng Wh Mnis Croanss$

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on point of jurisdiction. FIR read overto the Complainant! Informant. transferedtoP Ss... admitted tobe correctly recorded and copy giventothe Complainant. Informantfree of cost. Pls. 2m 2 Stes Q1 | Signaturegtthe Offcedn chaty Plies tation with Signatire Thumb Impréssioncf Name: adler Matte 'the Complainant formant Rani [5 2. 'Number ifany BDN fC. a Image: Electronics Complex PS9-21\_\_1.jpg Extracted Text:

#### FIRST INFORMATION REPORT

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- {8 Reasons for delay in reporting by the Complainant / Informant.

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Total value of Properties stolen /invol |. Inquest reportU.D. : Case No,. if an

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Image: Baguiati PS518-2021\_\_1.jpg

Extracted Text:

W.B.P. Form No. 27, FIRST INFORMATION REPORT 4623

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- 6 Complainant informant :
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