



10th Gurugram Police **Cyber Security** **Summer Internship 2022**

Gurugram Police & CyberPeace Foundation

20TH JUNE 2022 TO 20TH JULY 2022

Commissionerate of
Police Shanti Nagar,
Shivaji Nagar,
Sector 11, Gurugram, Haryana 122018

Under the guidance of

Dr. Rakshit Tandon
GPCSSI 2022

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DECLARATION

We certify that the work contained in this report is original and has been done by us under the guidance of **Dr. Rakshit Tandon Sir.**

- a. The work has not been submitted to any other sources.
- b. We have followed the guidelines provided by this Internship.

Name and Signature of Project Team Members:

Sr. No.	Name of Team Member	Signature
1.	<i>Aksh Puri (B.Tech, Dr. Akhilesh Das Gupta Institute of Technology & Management)</i>	
2.	<i>Asif Mohammad Khan (BCA, Jamia Hamdard University)</i>	
3.	<i>MD Tajdar Alam Ansari (BSC, Bhairab Ganguly College)</i>	
4.	<i>Yash Chavhan (B.tech CSE AI & ML)</i>	

CERTIFICATE

I hereby affirm, to the best of my knowledge and belief, based on inspections, observations, testing of the project and upon reports submitted by others, that this **Open Source Intelligence Tool(GP OSINT TOOL)** is substantially complete and operable. The Project was completed in accordance with the department's issued guidelines.

Date :

(Dr. Rakshit Tandon)

ACKNOWLEDGEMENT

The success and end result of this project requires a lot of guidance and endorsement from many people and we are fortunate to get all of these throughout our entire internship project.

We were able to accomplish this project only with such assistance and supervision and therefore, we will never forget to thank them.

We respect and thank **Dr. Rakshit Tandon , Commissioner of Police (Gurugram) , DCP Headquarters , Cyber peace Foundation , Gurugram Police** who allowed us to work on this specific project in **10th Gurugram Police Cyber Security Summer Internship 2022** and gave us all the support and guidance that motivated us to complete the project properly.

Despite being busy dealing with corporate matters we are very grateful to him for such admonition.

In addition, we would like to express our heartfelt gratitude to all the **Commissionerate police staff** for their timely support.

Yours Sincerely,

**Aksh
Asif
Tajdar
Yash**

Abstract

GP OSINT Tool is an Open Source Intelligence (OSINT) Tool and features of this tool are as follow -

It will find **IMAGE Meta data**, Image metadata is text information pertaining to an image file that is embedded into the file or contained in a separate file that is associated with it. Image metadata includes details relevant to the image itself as well as information about its production.

It will also do **PDF analysis**, it shows the author of the document and creation date and modified date and software which it used to create the pdf.

And the last feature is **Instagram Information**, It shows all information about an user found in the instagram like their name,postsposted,followed,following,verified,account status,Url's and profile picture url.

Methodology

We have used python programming language to code an OSINT Tool using a few modules such as PIL, EXIF TAGS, INSTAGRAMY, and PYPDF2.

This project will do OSINT such as it will find Image Metadata, PDF analysis which will shows the author of the document and creation date, and modified date and software which is used to create the pdf.

This project will find Information of the Instagram account we just have to give a username and it will show all information about a user found in Instagram like their name, posts posted, followed, following, verified, account status, and profile picture.

Source Code

```
gp osint.py X
C: > Users > lava2 > OneDrive > Desktop > GPI > gposint tool > gp osint.py > ...

1  from pdfanalysis import pdfinfo
2  from exif import gps
3  from Instagraminfo import instainfo
4
5  def reconinput():
6      inp=(input("gp osint >> "))
7      if(inp == '1'):
8          gps()
9      elif(inp=='2'):
10         instainfo()
11     elif (inp=='3'):
12         pdfinfo()
13     elif(inp=='exit'):
14         exit()
15
16
17
18 if __name__=="__main__":
19     print("""
20
21
22 GP OSINT
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30 MAAGE BY TEAM OF
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36 | | | | | Authors - Asif Mohammad Khan, Yash__HackZ, Aksh puri, MD Tajdar Alam Ansari
37
38 """)
39
40
41 language = 'en'
42 print('')
43 print("""Tools available
44
45 1.Image Meta data extraction
46 2.Instagram Info lookup
47 3.PDF meta data analysis
48 usage : type exit to stop
```



```
gp osint.py X
C: > Users > lava2 > OneDrive > Desktop > GPI > gposint tool > gp osint.py > .
48         usage : type exit to stop
49         """
50     print('')
51
52
53     while True:
54         reconinput()
55
```

```
gp osint.py  exif.py X Instagraminfo.py pdfanalysis.py
C: > Users > lava2 > OneDrive > Desktop > GPI > gposint tool > exif.py > ...
1  from PIL import Image
2  from PIL.ExifTags import TAGS
3
4  def get_exif(fn):
5      ret = {}
6      i = Image.open(fn)
7      info = i._getexif()
8      for tag, value in info.items():
9          decoded = TAGS.get(tag, tag)
10         ret[decoded] = value
11     return ret
12
13 def gps():
14     imagename=input("Enter the filepath : " )
15     exif=get_exif(imagename)
16     for key,value in exif.items():
17         print("%s : %s" %(key,value))
18
19 if __name__ == "__main__":
20     gps()
```

C:\Users> java2 > OneDrive > Desktop > GPI > gposint tool > Instagraminfo.py > ...

```

1  from instagramy import InstagramUser
2
3  def instainfo():
4      username=input("Username >> ")
5      user=InstagramUser(username)
6      print("-"*50)
7      print(" "*15,"User name : "+username)
8      print("-"*50)
9      print("Full name >> ",user.fullname)
10     print(' ')
11     print("Biography >> ",user.biography)
12     print(' ')
13     verify=user.is_verified
14     if(verify == False):
15         print("Verified status >> Not Verified")
16         print(' ')
17     else:
18         print("Verified status >> Verified")
19         print(' ')
20     account=user.is_private
21     if(account == False):
22         print("Account status >> Public account")
23         print(' ')
24     else:
25         print("Account status >> Private account")
26         print(' ')
27     print("URL >> ",user.website)
28     print(' ')
29     userphoto=user.profile_picture_url
30     print("Profile Picture url >> ",userphoto)
31     print('')
32     print("Followers >> ",user.number_of_followers)
33     print('')
34     print('Following >> ',user.number_of_followings)
35     print('')
36     print('Posts posted >> ',user.number_of_posts)
37     print('')
38
39     print('Completed...')
40     print('')
41
42 if __name__=="__main__":
43     instainfo()

```

C: > Users > lava2 > OneDrive > Desktop > GPI > gposint tool > pdfanalysis.py > ...

```
1  from PyPDF2 import PdfFileReader
2
3  def pdfinfo():
4      filep=input("File path >> ")
5      with open(filep, 'rb') as f:
6          pdf = PdfFileReader(f)
7          info = pdf.getDocumentInfo()
8          number_of_pages = pdf.getNumPages()
9      try:
10         author = info.author
11         creator = info.creator
12         producer = info.producer
13         print("[+] Author      : ",author)
14         print("[+] Creator       : ",creator)
15         print("[+] Producer      : ",producer)
16         cdate=info['/CreationDate']
17         cyear=cdate[2:6]
18         cmonth=cdate[6:8]
19         cd=cdate[8:10]
20         print("[+] Creation Date : ",cd,":",cmonth,":",cyear)
21         mdate=info['/ModDate']
22         myear=cdate[2:6]
23         mmonth=cdate[6:8]
24         md=cdate[8:10]
25         print("[+] Modified Date : ",md,":",mmonth,":",myear)
26     except:
27         print("[-] Meta data not available")
28 if __name__=="__main__":
29     pdfinfo()
```

Output

GP OSINT

MADE BY TEAM 18

Authors - Asif Mohammad Khan, Yash__HackZ, Aksh puri, MD Tajdar Alam Ansari

Tools available

1. Image Meta data extraction
 2. Instagram Info lookup
 3. PDF meta data analysis
- usage : type exit to stop

gp osint >>

Tools available

1. Image Meta data extraction
 2. Instagram Info lookup
 3. PDF meta data analysis
- usage : type exit to stop

gp osint >> 1

Enter the filepath : c:\Users\lava2\OneDrive\Desktop\GPI\gposint tool\a.jpg

ImageWidth : 4000

ImageLength : 1824

ResolutionUnit : 2

ExifOffset : 197

Make : OnePlus

Model : GM1911

Orientation : 6

YCbCrPositioning : 1

DateTime : 2022:07:16 21:38:36

XResolution : 72.0

SceneType : b'\x01'

ApertureValue : 1.44

ColorSpace : 1

ExposureBiasValue : nan

MaxApertureValue : 1.44

ExifImageHeight : 1824

BrightnessValue : -6.62

DateTimeOriginal : 2022:07:16 21:38:36

FlashPixVersion : b'\x0100'

WhiteBalance : 0

ExifInteroperabilityOffset : 776

Flash : 16

ExifImageWidth : 4000

ComponentsConfiguration : b'\x01\x02\x03\x00'

MeteringMode : 1

SubsecTime : 186408

SubsecTimeOriginal : 186408

SubsecTimeDigitized : 186408

FocalLength : 4.755

DateTimeDigitized : 2022:07:16 21:38:36

ShutterSpeedValue : 2.836

SensingMethod : 1

ExposureTime : 0.14285714285714285

FNumber : 1.65

ExposureProgram : 2

ISO Speed Ratings : 2500

ExposureMode : 0

```

gp osint >> 2
Username >> yash_hackz
-----
User name : yash_hackz
-----
Full name >>
Biography >>
Verified status >> Not Verified
Account status >> Public account
URL >> None
Profile Picture url >> https://scontent-waw1-1.cdninstagram.com/v/t51.2885-19/44884218_345787182882519_2446869589734326272_n.jpg?_nc_ht=scontent-waw1-1.cdninstagram.com&_nc_cat=1&_nc_ohc=Iyb7KQST1j4AX_y9DvV&edm=AHqBG
sid=a14057
Followers >> 3
Following >> 0
Posts posted >> 0
Completed....

```

```

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  JUPYTER
gp osint >> & C:/Users/lava2/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/lava2/OneDrive/Desktop/GPI/gposint tool/gp osint.py"
gp osint >> 3
File path >> c:\Users\lava2\OneDrive\Desktop\GPI\gposint tool\web.pdf
[+] Author      : Asif Khan
[+] Creator     : Canva
[+] Producer    : Canva
[+] Creation Date : 15 : 02 : 2022
[+] Modified Date : 15 : 02 : 2022
gp osint >> █

```


References

- Wikipedia (<https://www.wikipedia.org/>)
- <https://pypi.org/project/PyPDF2/>
- <https://pypi.org/project/instagramy/>
- <https://pypi.org/project/Pillow/>
- PythonDocumentations(<https://docs.python.org/>)