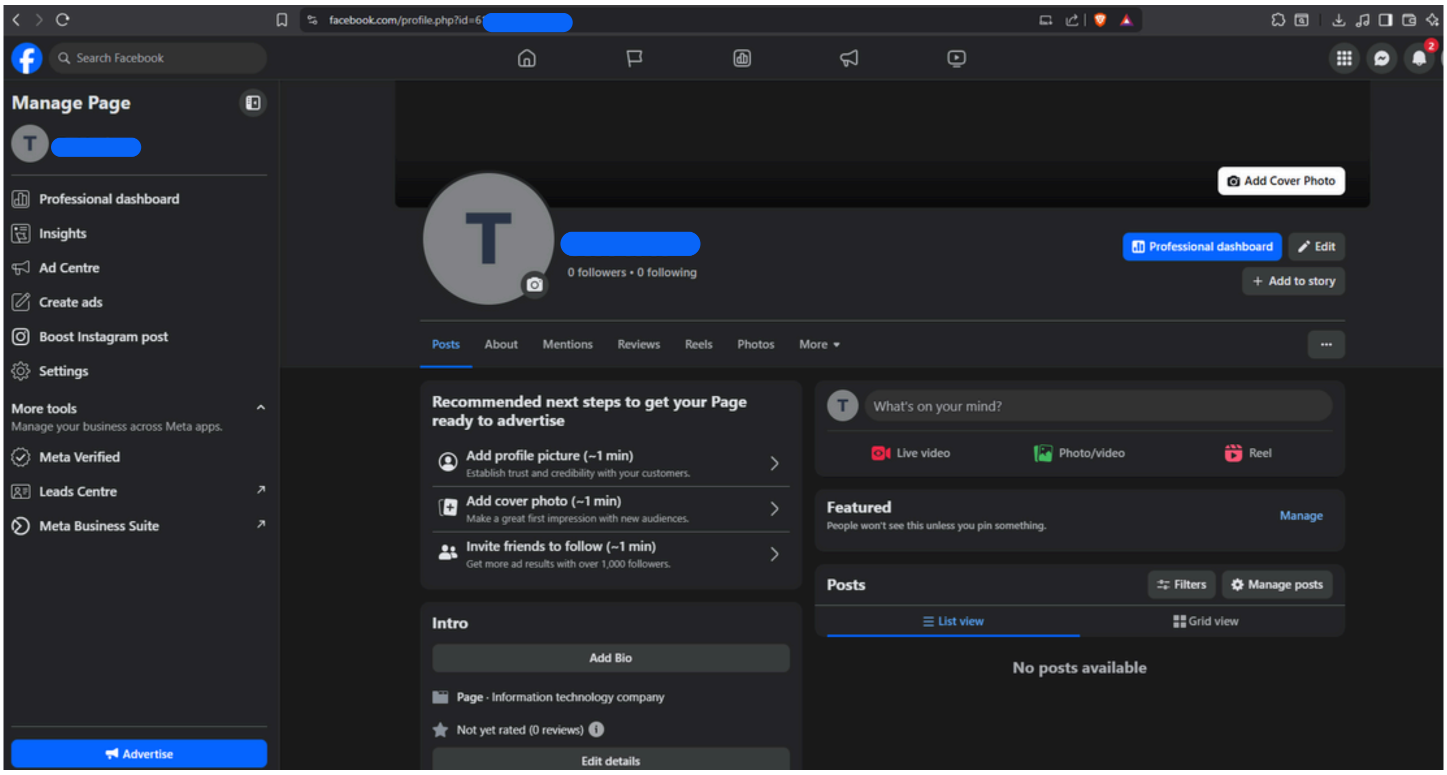
Workflow

- [Meta Graph API Configuration Process]
- [Google Custom Search API Configuration Process]

Meta Graph API Configuration Process

The following steps describe the detailed procedure I personally completed to configure and authenticate the **Meta Graph API** for integration with the *Instagram Impersonation Detection* system:

- **Created a Facebook Account and Page**
  - Set up a new Facebook account.
  - Created a Facebook Page (used later to link with the Instagram account).



Recommended next steps to get your Page ready to advertise

Add profile picture (~1 min)
Establish trust and credibility with your customers.

Add cover photo (~1 min)
Make a great first impression with new audiences.

Invite friends to follow (~1 min)
Get more ad results with over 1,000 followers.

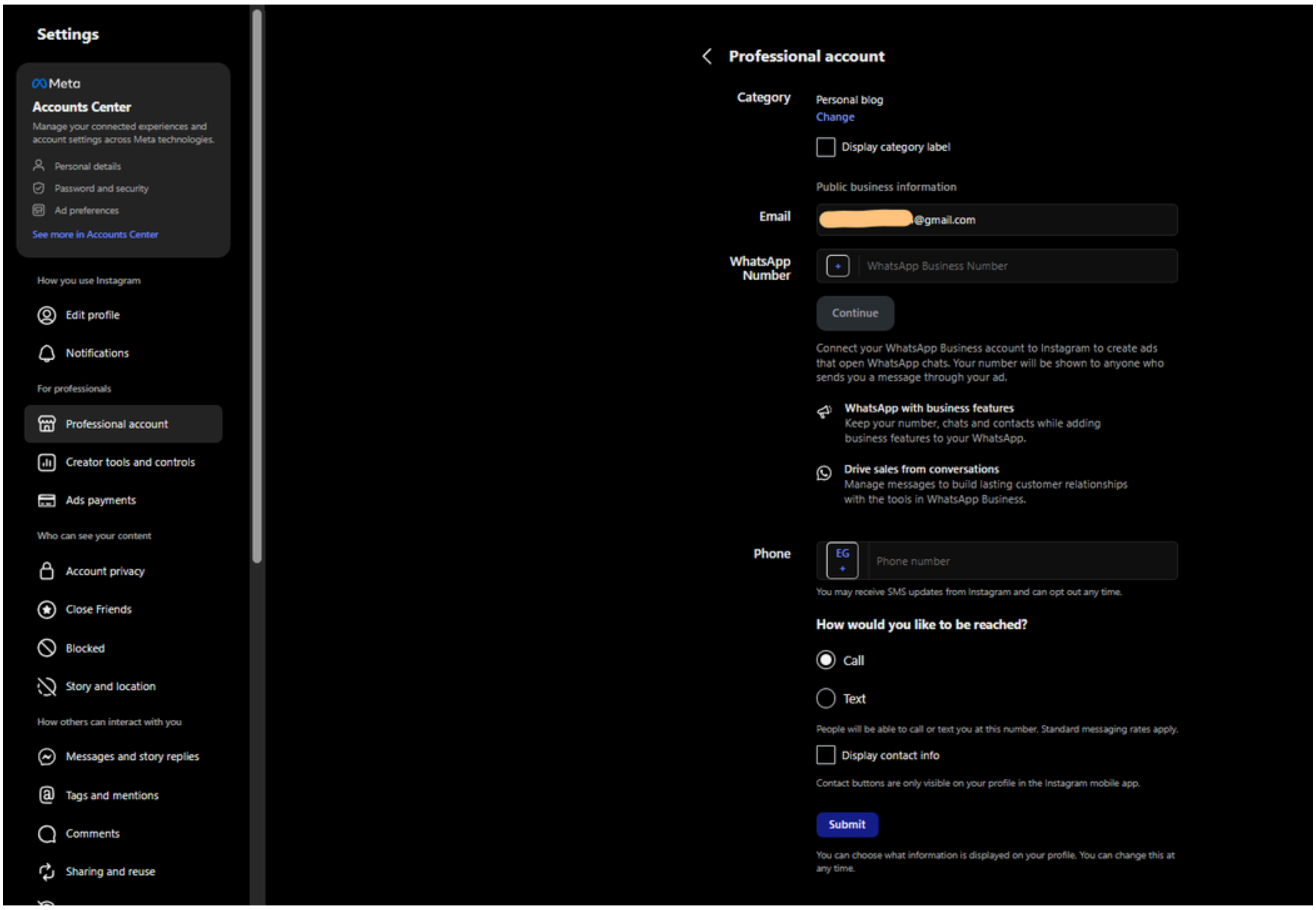
People won't see this unless you pin something.

No posts available

Page · Information technology company

Not yet rated (0 reviews)

- **Created an Instagram Business Account**
  - Converted a standard Instagram profile into a Business account.
  - Added business category and contact information.



Professional account

Category: Personal blog
Change

Display category label

Public business information

Email: [redacted]@gmail.com

WhatsApp Number: WhatsApp Business Number

Continue

Connect your WhatsApp Business account to Instagram to create ads that open WhatsApp chats. Your number will be shown to anyone who sends you a message through your ad.

WhatsApp with business features
Keep your number, chats and contacts while adding business features to your WhatsApp.

Drive sales from conversations
Manage messages to build lasting customer relationships with the tools in WhatsApp Business.

Phone: EG Phone number

You may receive SMS updates from Instagram and can opt out any time.

How would you like to be reached?

[✓ Call]

Text

People will be able to call or text you at this number. Standard messaging rates apply.

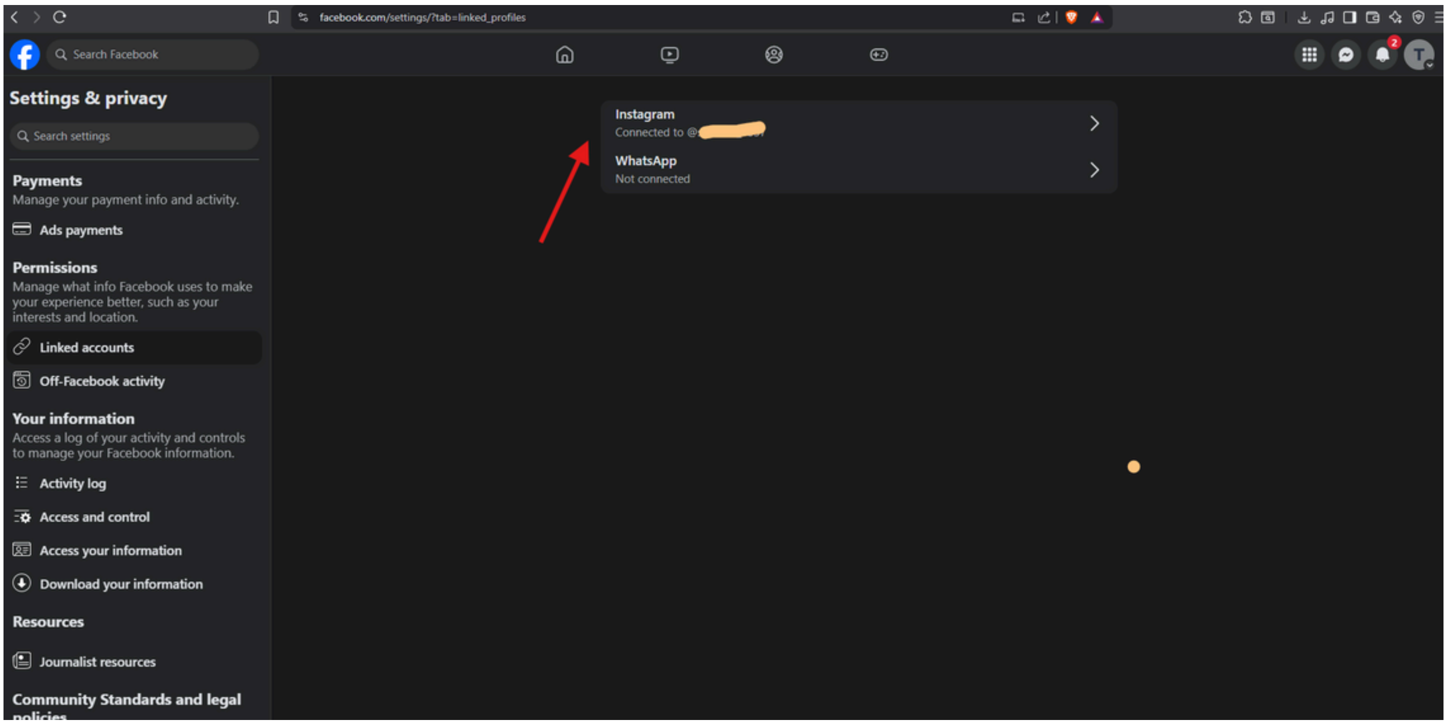
Display contact info

Contact buttons are only visible on your profile in the Instagram mobile app.

Submit

You can choose what information is displayed on your profile. You can change this at any time.

- **Linked Facebook Page to Instagram Business Account**
  - Opened Facebook Page → *Settings* → *Linked Accounts* → *Instagram*.
  - Logged in to the Instagram Business account and successfully linked it to the Page.

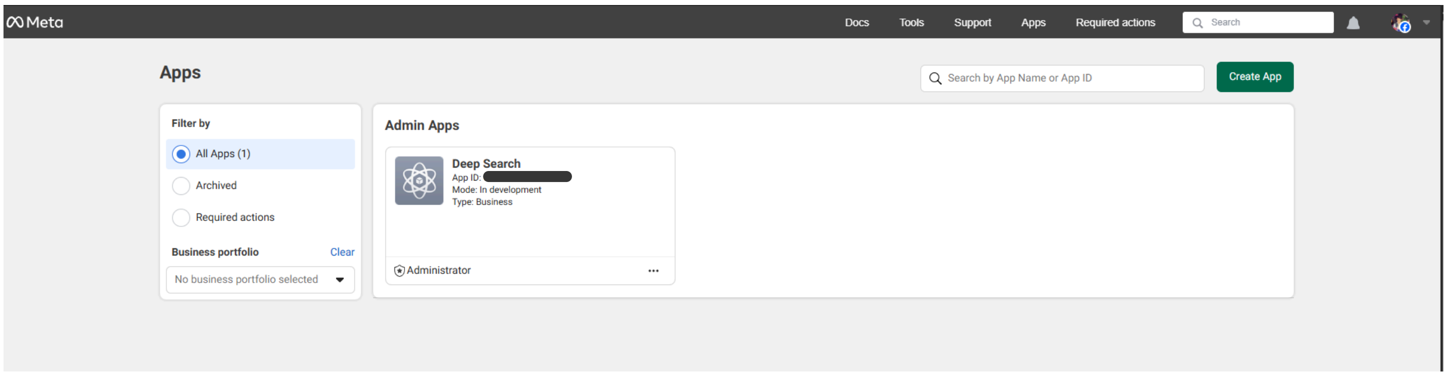

facebook.com/settings/?tab=linked_profiles
Search Facebook
Settings & privacy
Search settings
Payments
Manage your payment info and activity.
Ads payments
Permissions
Manage what info Facebook uses to make your experience better, such as your interests and location.
Linked accounts
Off-Facebook activity
Your information
Access a log of your activity and controls to manage your Facebook information.
Activity log
Access and control
Access your information
Download your information
Resources
Journalist resources
Community Standards and legal policies

Instagram
Connected to @[redacted]

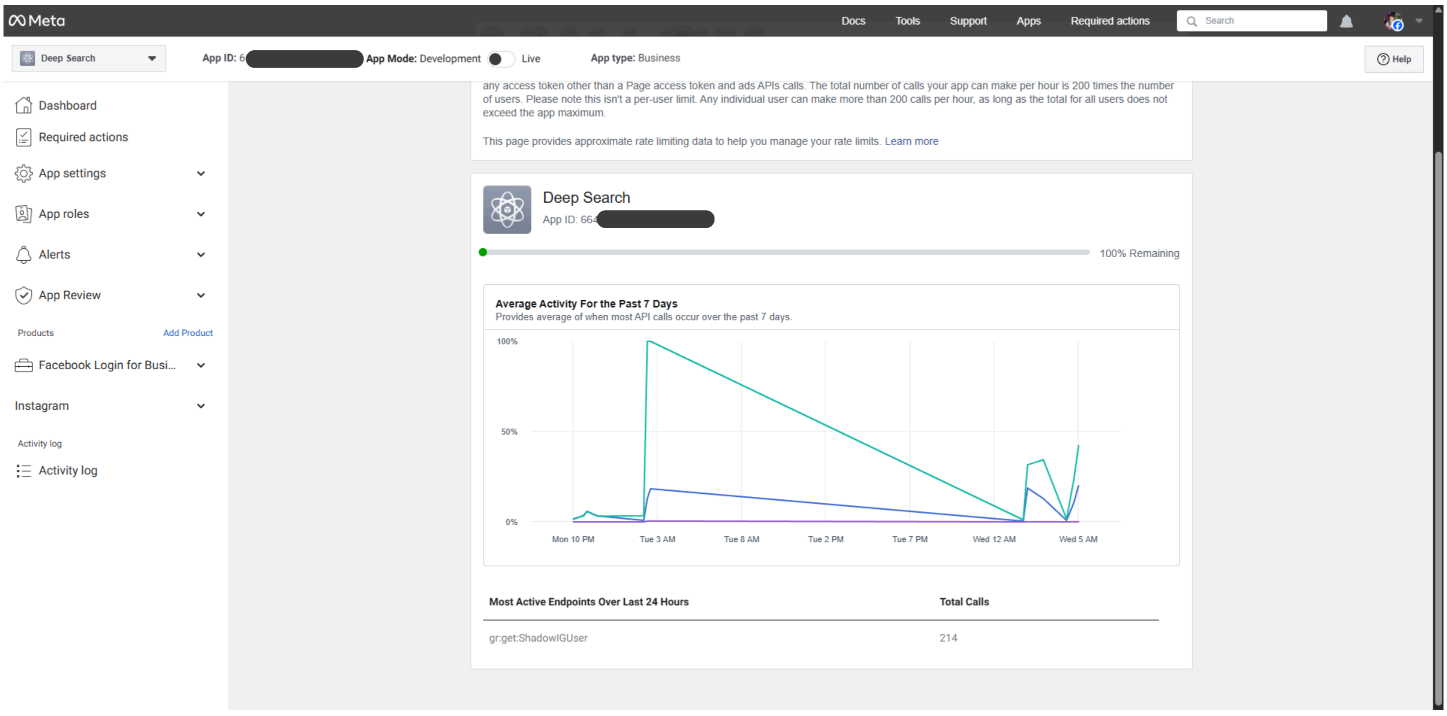
WhatsApp
Not connected

- **Created a Facebook Developer Account**
  - Registered at https://developers.facebook.com.
  - Completed developer verification to access Meta APIs.

- **Created a Facebook App**
  - From the Developer Dashboard, selected **Create App → Business** type.
  - Assigned a name and contact email for the app.
  - Added **Instagram Graph API** and **Pages API** products.
  - Obtained the **App ID** and **App Secret** from the app's *Settings → Basic* section.



Deep Search
App ID: [redacted]
Mode: In development
Type: Business



App ID: 6[redacted] App Mode: Development Live App type: Business

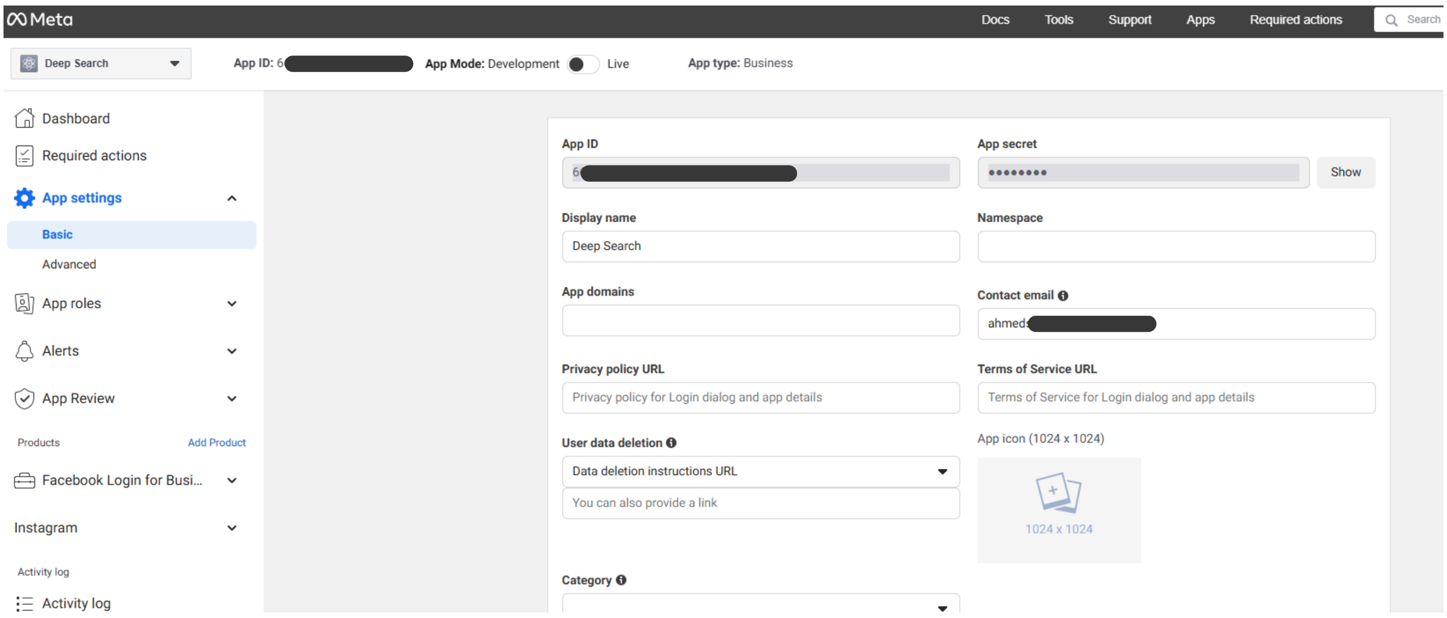
any access token other than a Page access token and ads APIs calls. The total number of calls your app can make per hour is 200 times the number of users. Please note this isn't a per-user limit. Any individual user can make more than 200 calls per hour, as long as the total for all users does not exceed the app maximum.

This page provides approximate rate limiting data to help you manage your rate limits. Learn more

Deep Search
App ID: 664[redacted]
100% Remaining

Average Activity For the Past 7 Days
Provides average of when most API calls occur over the past 7 days.

Most Active Endpoints Over Last 24 Hours	Total Calls
gr:get:ShadowIGUser	214

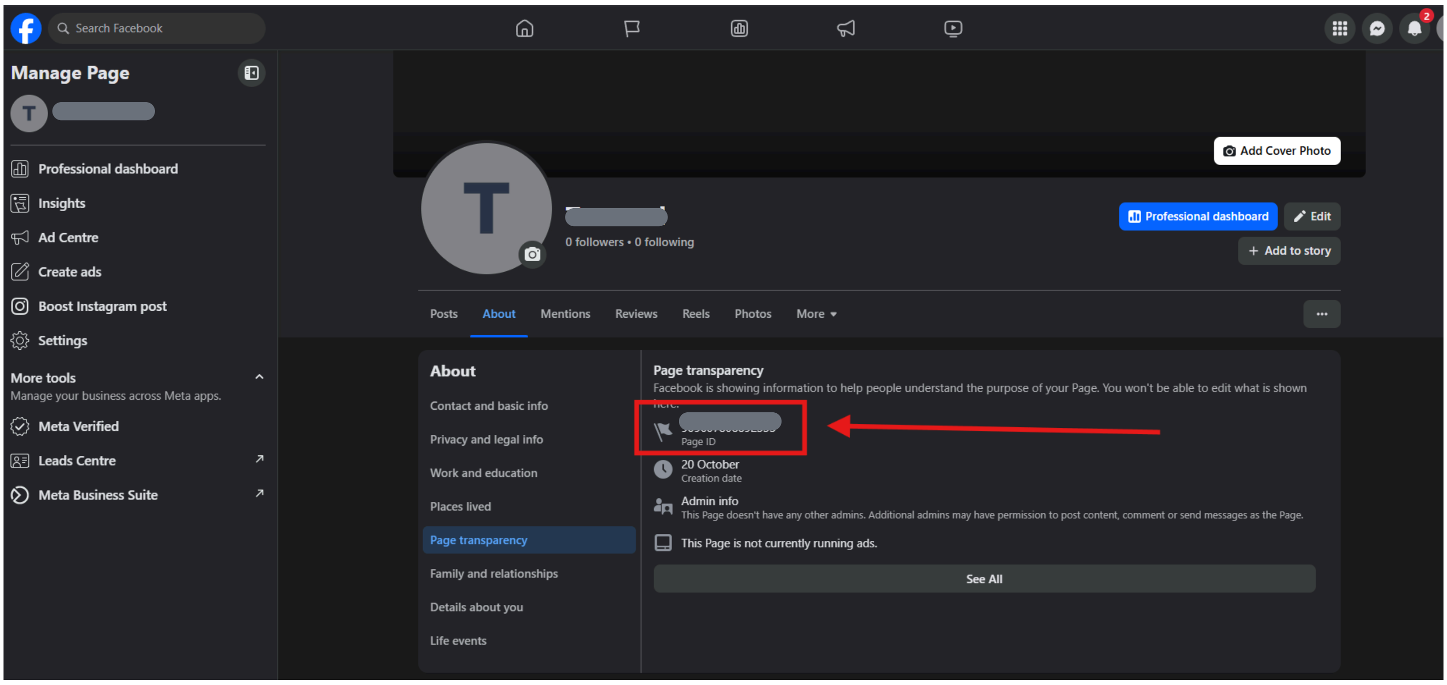


App ID: 6[redacted] App Mode: Development Live App type: Business

App ID	App secret
6[redacted]	••••••••
Display name	Namespace
Deep Search	
App domains	Contact email
	ahmed[redacted]
Privacy policy URL	Terms of Service URL
Privacy policy for Login dialog and app details	Terms of Service for Login dialog and app details
User data deletion	App icon (1024 x 1024)
Data deletion instructions URL	
You can also provide a link	
Category	

- **Retrieved IDs for Integration**

- **Facebook Page ID:** Copied from the Facebook Page's *About* section.
- **Instagram Business Account ID:** Retrieved via Graph API:
- GET https://graph.facebook.com/v24.0/{page-id}?fields=instagram_business_account



Search Facebook

Manage Page

T [redacted]

Professional dashboard
Insights
Ad Centre
Create ads
Boost Instagram post
Settings

More tools
Manage your business across Meta apps.

Meta Verified
Leads Centre
Meta Business Suite

Add Cover Photo

[redacted]
0 followers • 0 following

Professional dashboard
Edit
Add to story

Posts | About | Mentions | Reviews | Reels | Photos | More

About

Contact and basic info
Privacy and legal info
Work and education
Places lived
Page transparency
Family and relationships
Details about you
Life events

Page transparency
Facebook is showing information to help people understand the purpose of your Page. You won't be able to edit what is shown here.

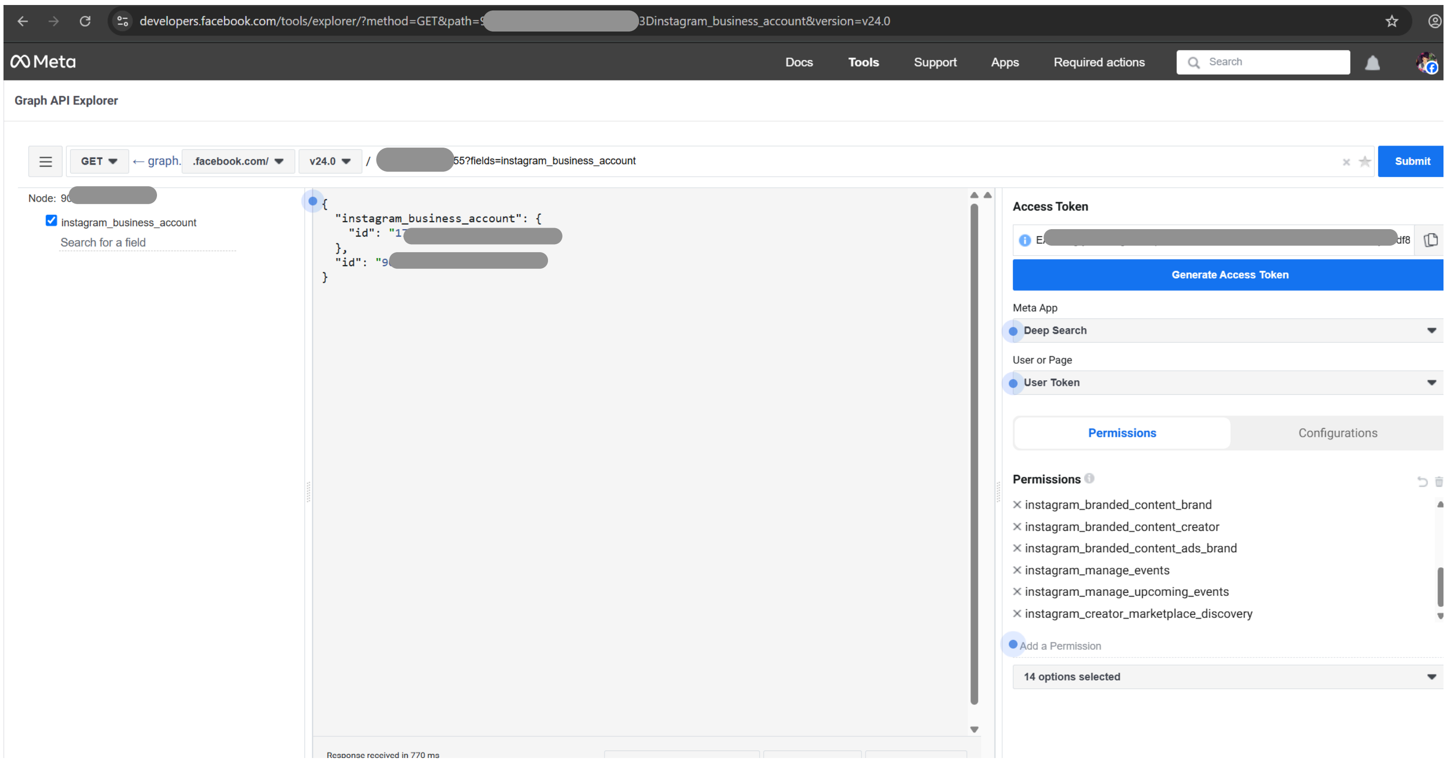
[redacted]
Page ID

20 October
Creation date

Admin info
This Page doesn't have any other admins. Additional admins may have permission to post content, comment or send messages as the Page.

This Page is not currently running ads.

See All



developers.facebook.com/tools/explorer/?method=GET&path=[redacted]3Dinstagram_business_account&version=v24.0

Meta | Docs | Tools | Support | Apps | Required actions | Search

Graph API Explorer

GET ← graph.facebook.com/ v24.0 / [redacted]55?fields=instagram_business_account Submit

Node: [redacted]
☑ instagram_business_account
Search for a field

```
{
  "instagram_business_account": {
    "id": "[redacted]"
  },
  "id": "[redacted]"
}
```

Response received in 770 ms

Access Token
[redacted]df8

Generate Access Token

Meta App
Deep Search

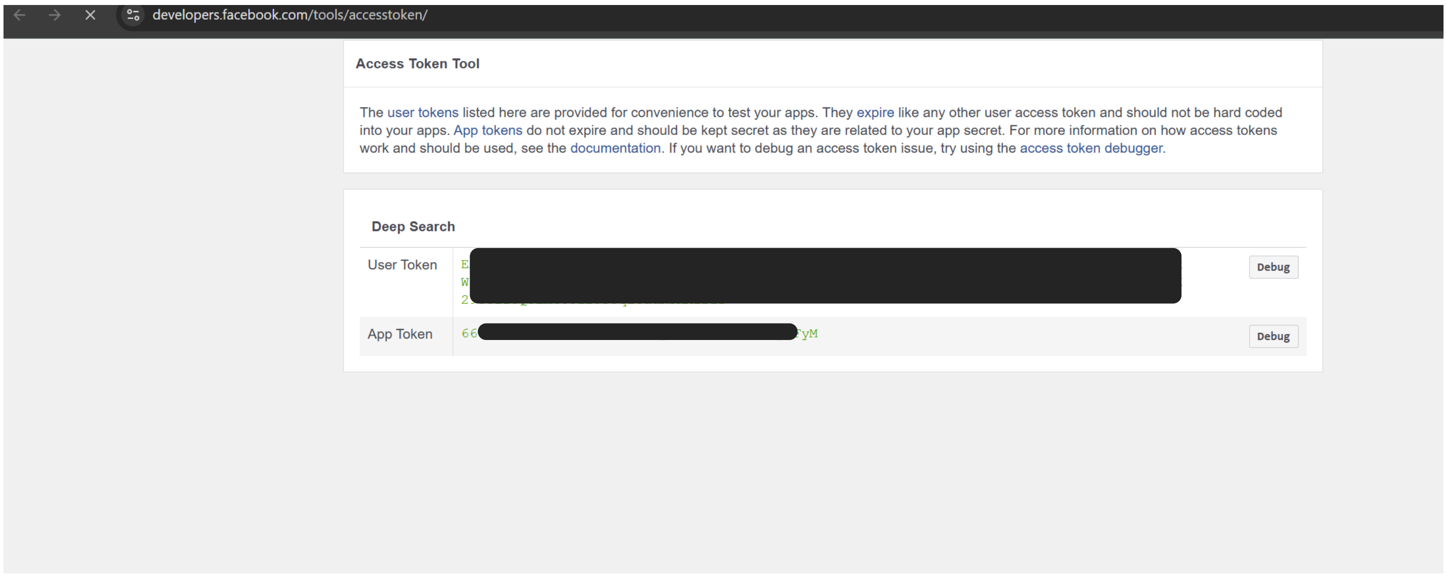
User or Page
User Token

Permissions | Configurations

Permissions
× instagram_branded_content_brand
× instagram_branded_content_creator
× instagram_branded_content_ads_brand
× instagram_manage_events
× instagram_manage_upcoming_events
× instagram_creator_marketplace_discovery

Add a Permission
14 options selected

- **Generated a User Access Token**
  - Used the **Graph API Explorer** tool.
  - Selected the app and granted permissions: instagram_basic, pages_show_list, business_management, and instagram_manage_insights.
  - Generated a short-lived **User Access Token** and tested it with:
  - GET https://graph.facebook.com/v24.0/me/accounts?access_token={token}


developers.facebook.com/tools/accesstoken/

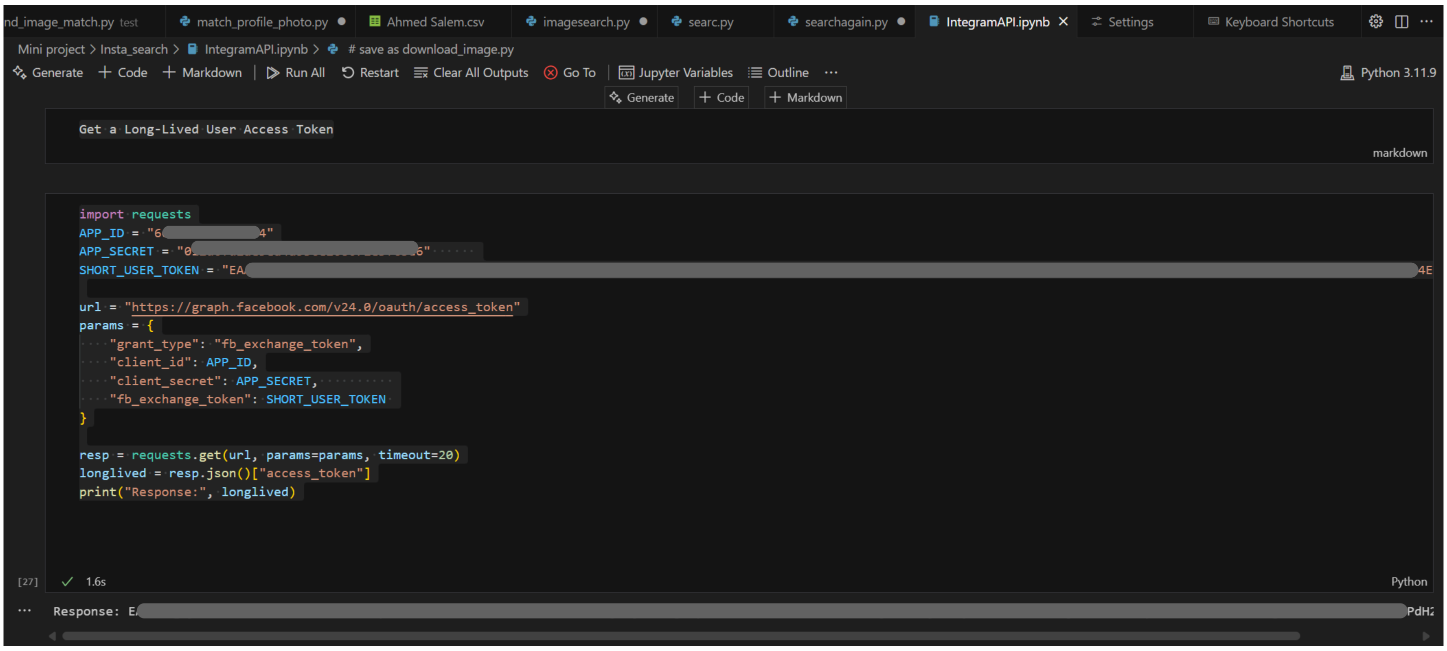
Access Token Tool

The user tokens listed here are provided for convenience to test your apps. They expire like any other user access token and should not be hard coded into your apps. App tokens do not expire and should be kept secret as they are related to your app secret. For more information on how access tokens work and should be used, see the documentation. If you want to debug an access token issue, try using the access token debugger.

Deep Search

User Token	[redacted]	Debug
App Token	66[redacted]FyM	Debug

- **Exchanged for a Long-Lived Access Token**
  - Used the following endpoint to extend the token validity (~60 days):
  - GET https://graph.facebook.com/v24.0/oauth/access_token
  - ?grant_type=fb_exchange_token
  - &client_id={APP_ID}
  - &client_secret={APP_SECRET}
  - &fb_exchange_token={SHORT_TOKEN}
  - The response returned a **Long-Lived Access Token** used by the system.



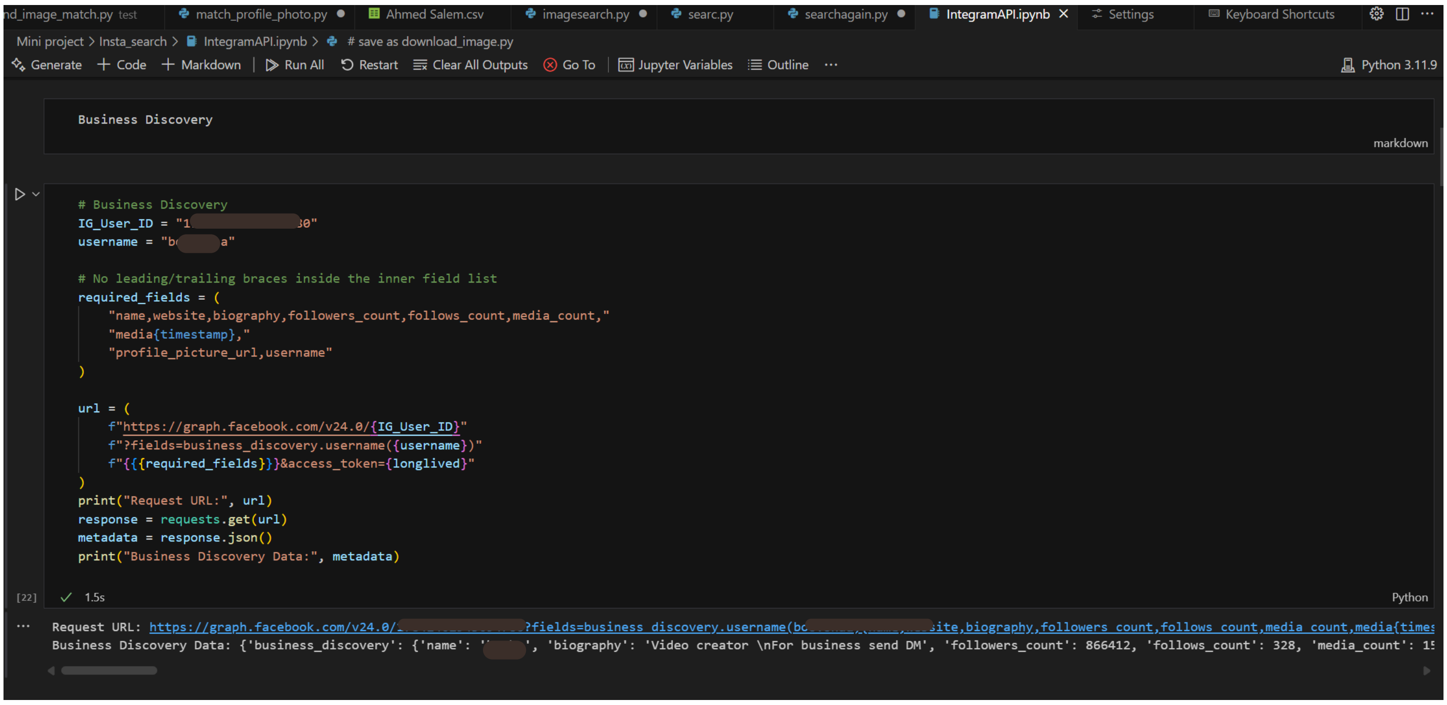
Get a Long-Lived User Access Token

```python
import requests
APP_ID = "6[redacted]4"
APP_SECRET = "0[redacted]6"
SHORT_USER_TOKEN = "EA[redacted]4E

url = "https://graph.facebook.com/v24.0/oauth/access_token"
params = {
    "grant_type": "fb_exchange_token",
    "client_id": APP_ID,
    "client_secret": APP_SECRET,
    "fb_exchange_token": SHORT_USER_TOKEN
}

resp = requests.get(url, params=params, timeout=20)
longlived = resp.json()["access_token"]
print("Response:", longlived)
```

[27] ✓ 1.6s

```
Response: E[redacted]PdHz
```

- **Verified Successful Integration**
  - Sent a test request to confirm valid access and data retrieval:
  - GET https://graph.facebook.com/v24.0/{IG_USER_ID}
  - ?fields=name,biography,followers_count,follows_count,media_count
  - &access_token={LONG_LIVED_TOKEN}
  - Received valid JSON data confirming the Facebook Page, Instagram Business Account, and App were correctly linked.



```
Business Discovery
```

```python
# Business Discovery
IG_User_ID = "1[redacted]0"
username = "b[redacted]a"

# No leading/trailing braces inside the inner field list
required_fields = (
    "name,website,biography,followers_count,follows_count,media_count,"
    "media{timestamp},"
    "profile_picture_url,username"
)

url = (
    f"https://graph.facebook.com/v24.0/{IG_User_ID}"
    f"?fields=business_discovery.username({username})"
    f"{{{required_fields}}}&access_token={longlived}"
)
print("Request URL:", url)
response = requests.get(url)
metadata = response.json()
print("Business Discovery Data:", metadata)
```

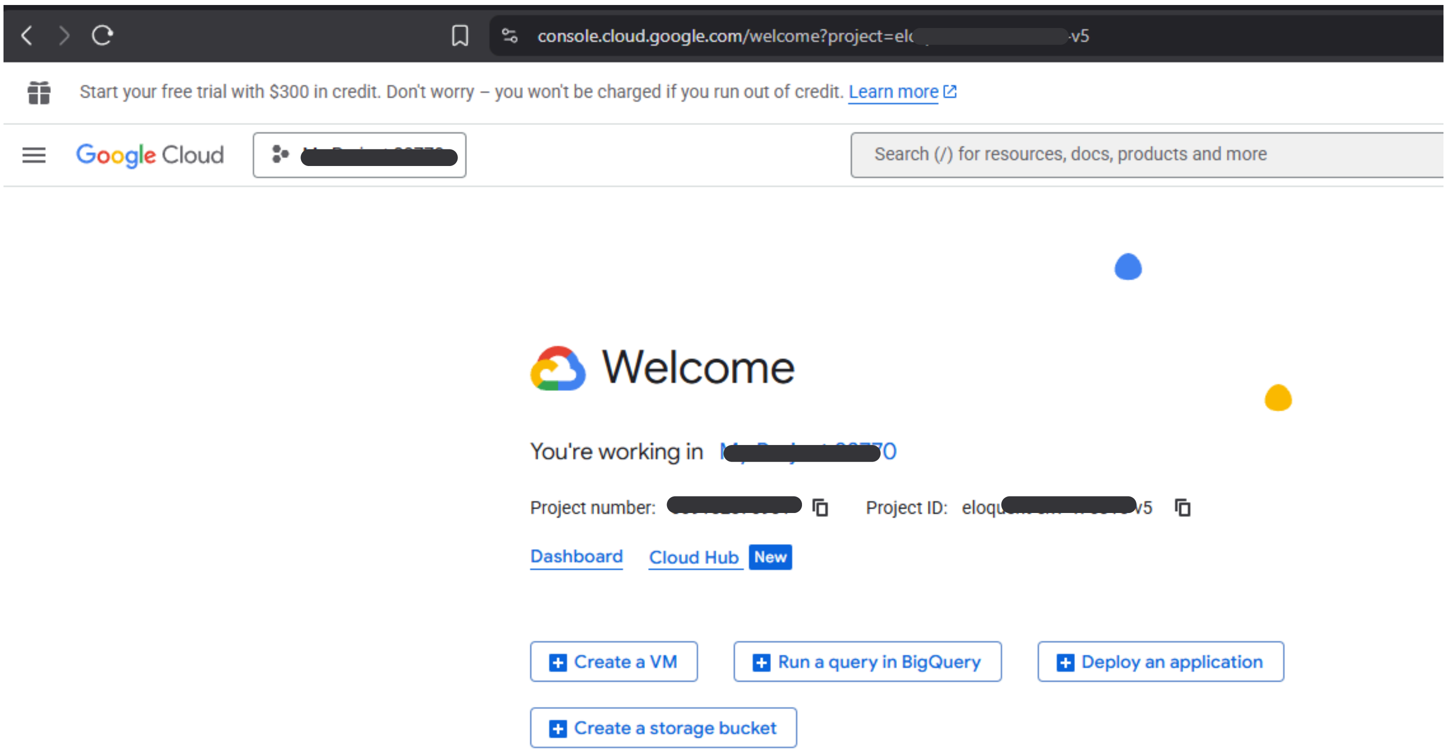
```
Request URL: https://graph.facebook.com/v24.0/[redacted]?fields=business_discovery.username(bc[redacted]site,biography,followers_count,follows_count,media_count,media{times
Business Discovery Data: {'business_discovery': {'name': '[redacted]', 'biography': 'Video creator \nFor business send DM', 'followers_count': 866412, 'follows_count': 328, 'media_count': 15
```

- **Final Outcome**
  - Fully configured Meta environment with:
    - • Facebook App ID and Secret
    - • Facebook Page ID
    - • Instagram Business Account ID
    - • Long-Lived Access Token
  - The environment is now integrated with the **Instagram Impersonation Detection** system for metadata retrieval and analysis.

- **Google Custom Search API Configuration Process**

Created a Google Cloud Project

- Logged in to the **Google Cloud Console** at https://console.cloud.google.com/.
- Clicked **Create Project**, assigned a name (e.g., *CSE-Instagram-Search*), and saved it.
- This project serves as the container for the Custom Search API service.



console.cloud.google.com/welcome?project=el[redacted]v5

Start your free trial with $300 in credit. Don't worry – you won't be charged if you run out of credit. Learn more

[redacted]

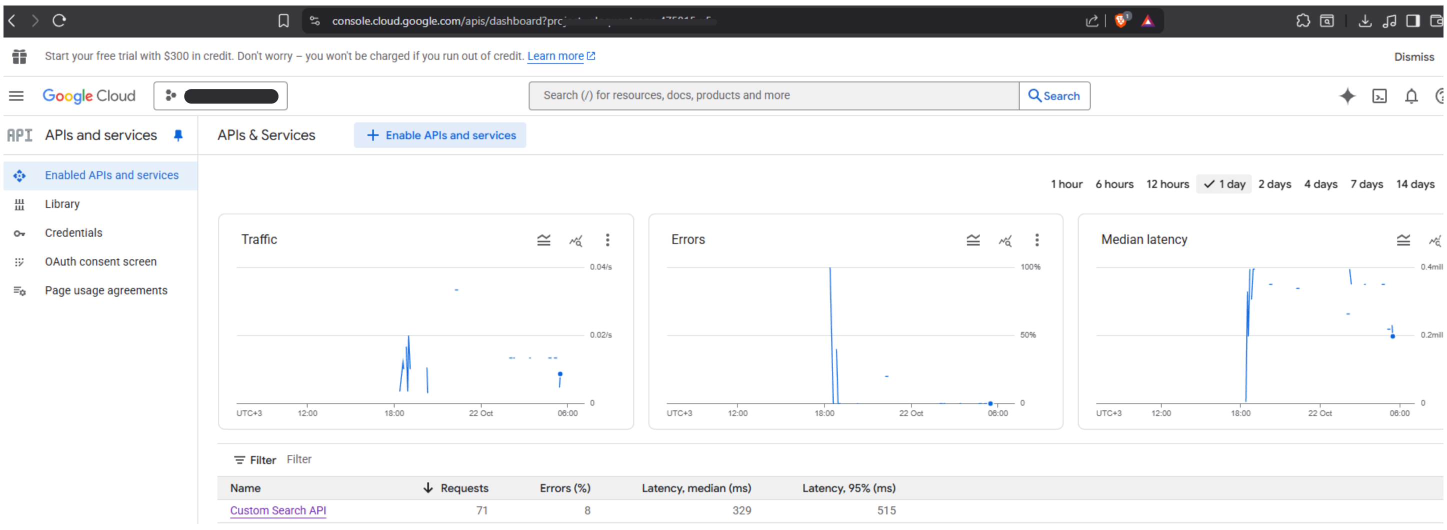
Welcome

You're working in [redacted]

Project number: [redacted] Project ID: eloq[redacted]v5

Enabled the Custom Search API

- From the project's dashboard, opened **APIs & Services → Library**.
- Searched for **Custom Search API** and clicked **Enable**.
- This activated programmatic access for web search queries.



console.cloud.google.com/apis/dashboard?pro[redacted]

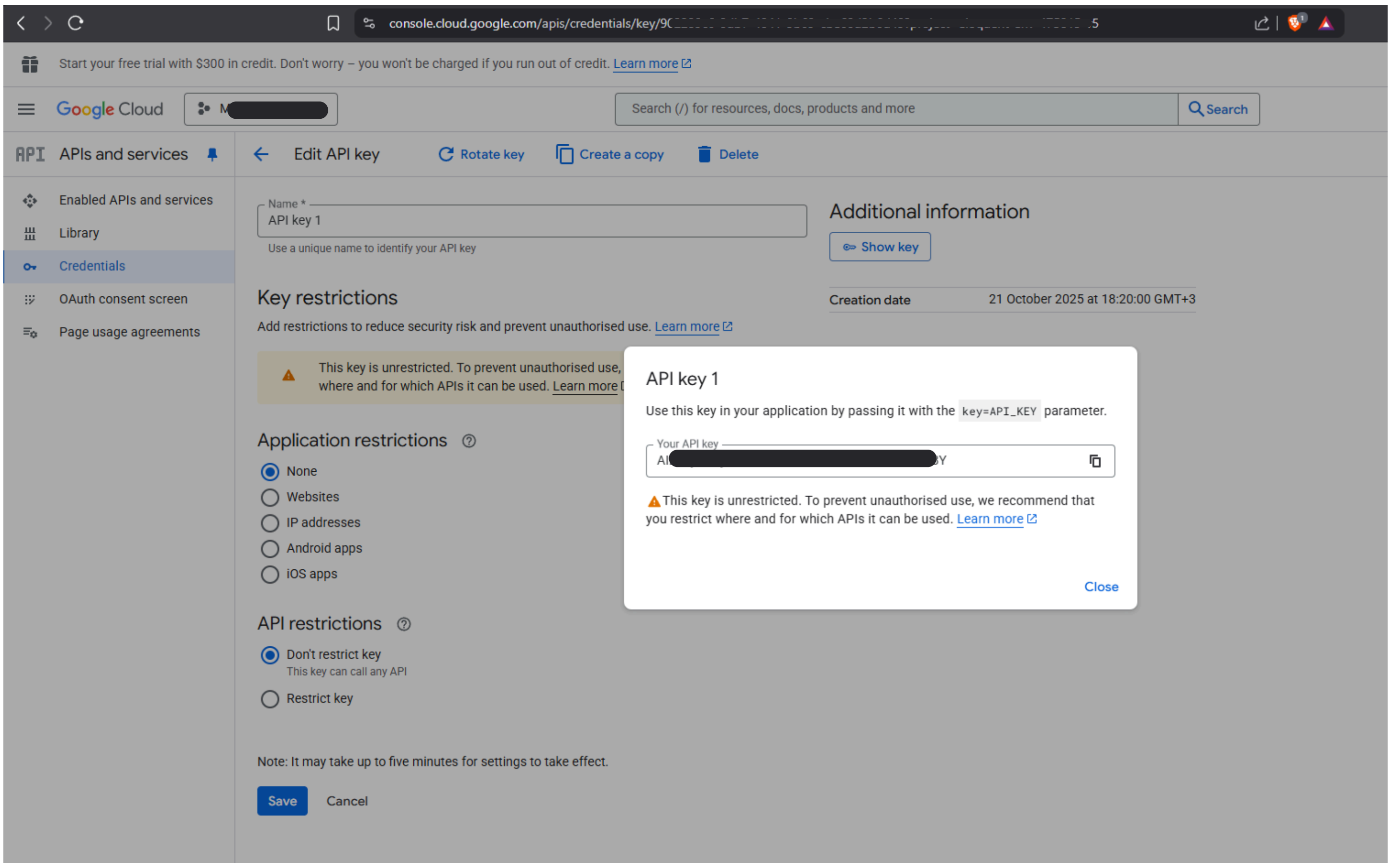
Start your free trial with $300 in credit. Don't worry – you won't be charged if you run out of credit. Learn more

[redacted]

Name	Requests	Errors (%)	Latency, median (ms)	Latency, 95% (ms)
Custom Search API	71	8	329	515

Created API Credentials

- Navigated to **APIs & Services → Credentials → Create Credentials → API key**.
- Google generated a unique key in the format:
- GOOGLE_API_KEY = "AIzaSyXXXX..."
- Copied and securely stored this key for use in the Python script.



console.cloud.google.com/apis/credentials/key/9[redacted]5

Start your free trial with $300 in credit. Don't worry – you won't be charged if you run out of credit. Learn more

Google Cloud M[redacted] Search (/) for resources, docs, products and more Search

APIs and services — Edit API key — Rotate key — Create a copy — Delete

Enabled APIs and services
Library
Credentials
OAuth consent screen
Page usage agreements

Name *: API key 1
Use a unique name to identify your API key

Additional information
Show key
Creation date: 21 October 2025 at 18:20:00 GMT+3

Key restrictions
Add restrictions to reduce security risk and prevent unauthorised use. Learn more

This key is unrestricted. To prevent unauthorised use, where and for which APIs it can be used. Learn more

Application restrictions
[✓ None] Websites IP addresses Android apps iOS apps

API restrictions
[✓ Don't restrict key] This key can call any API
Restrict key

Note: It may take up to five minutes for settings to take effect.

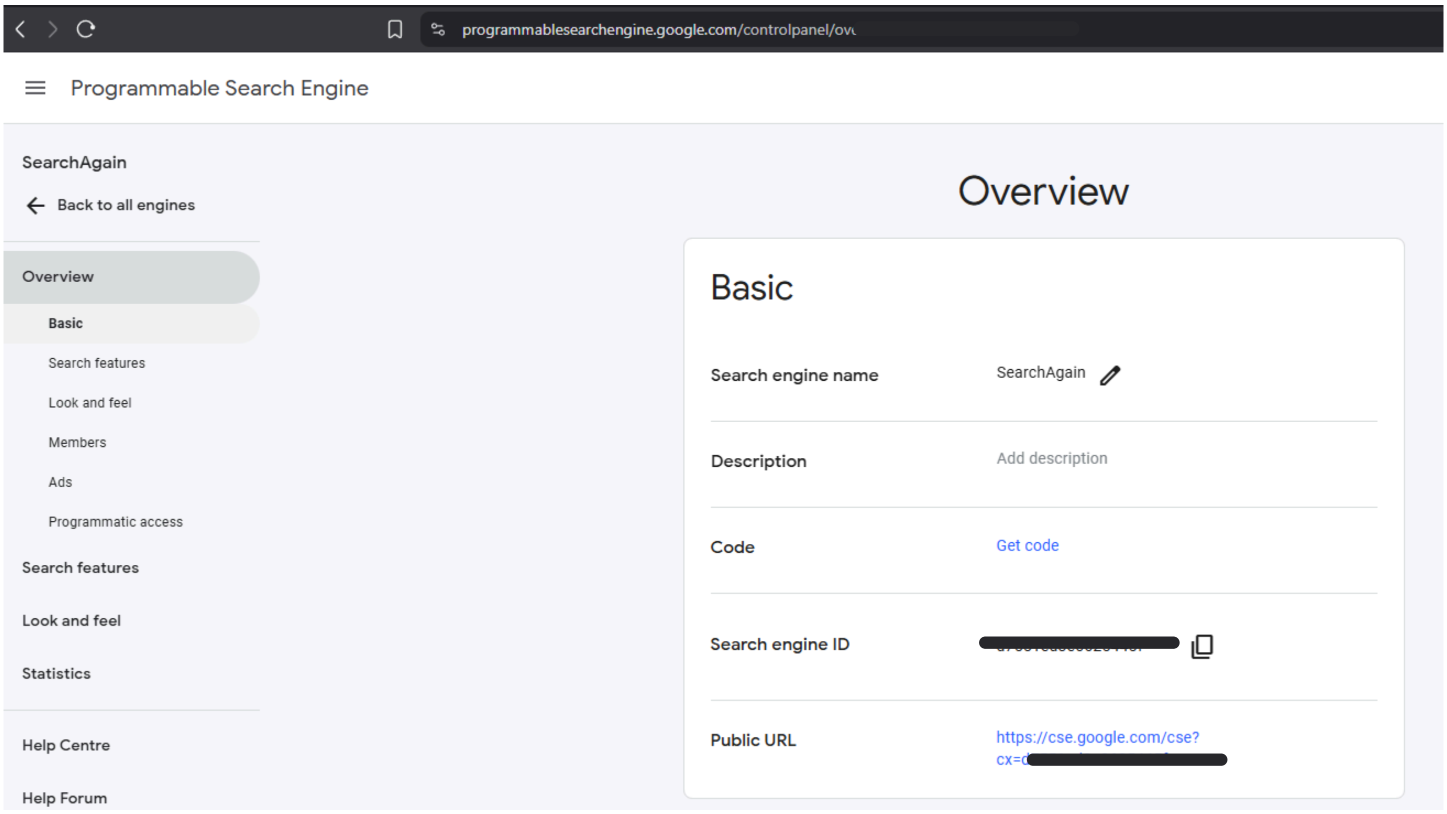
Save Cancel

API key 1
Use this key in your application by passing it with the `key=API_KEY` parameter.
Your API key: AI[redacted]Y
This key is unrestricted. To prevent unauthorised use, we recommend that you restrict where and for which APIs it can be used. Learn more

Close

Created a Custom Search Engine (CSE)

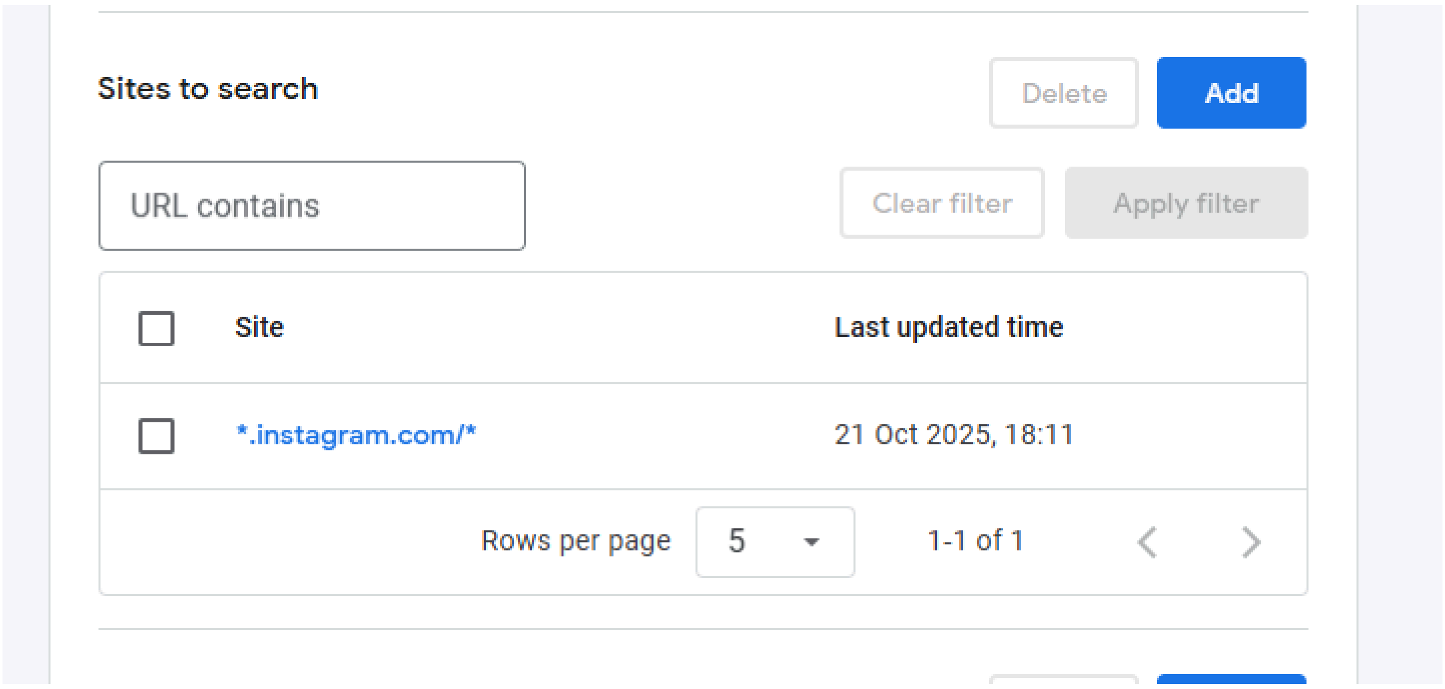
- Opened https://cse.google.com/cse/.
- Selected **Add → New Search Engine**.
- In the "Sites to search" field, entered:
  - instagram.com
- Assigned a name (e.g., *Instagram-Finder*) and clicked **Create**.



Overview

Basic

Search engine name	SearchAgain
Description	Add description
Code	Get code
Search engine ID	[redacted]
Public URL	https://cse.google.com/cse?cx=[redacted]



☐	Site	Last updated time
☐	*.instagram.com/*	21 Oct 2025, 18:11

Retrieved the Search Engine ID (CX)

- Opened the CSE control panel → *Setup* → *Basic*.
- Copied the **Search engine ID**, which appears in the format:
- GOOGLE_CX = "dXXXXXXXXXXXXXf"
- This ID uniquely identifies the custom search instance linked to the project.

Adjusted Search Engine Settings

- In the CSE dashboard, enabled **Search the entire web** under *Sites to search*.
- Disabled image search (optional) to reduce irrelevant results.
- Saved changes.

Connected API Key and CSE ID in Code

- Added both values to the script configuration:
- GOOGLE_API_KEY = "AIzaSyXXXX..."
- GOOGLE_CX   = "d75XXXXXXXXXX5f"
- CSE_URL   = "https://www.googleapis.com/customsearch/v1"
- Verified connectivity by running a test query:
- https://www.googleapis.com/customsearch/v1?key={GOOGLE_API_KEY}&cx={GOOGLE_CX}&q=site:instagram.com+John+Doe

Tested Successful Integration

- The API returned JSON data containing Instagram profile URLs matching the query.
- These results were parsed by the script to extract usernames and build the candidate list.

Final Outcome

- Successfully configured and validated:
  • **GOOGLE_API_KEY** – the authentication key for API access
  • **GOOGLE_CX** – the Custom Search Engine identifier
  • **CSE_URL** – the endpoint used by the system