# Minor Project

#### Website: Instagram (https://www.instagram.com/)

Registrant	REDACTED FOR PRIVACY (DT)
Registrant Org	Instagram LLC
<b>Registrant Country</b>	US
Registrar	RegistrarSafe, LLC IANA ID: 3237 URL: https://www.registrarsafe.com,http://www.registrarsafe.com Whois Server: whois.registrarsafe.com abusecomplaints@registrarsafe.com (p) 16503087004
Registrar Status	$client Delete Prohibited, \ client Transfer Prohibited, \ client Update Prohibited, \ server Delete Prohibited, \ server Transfer Prohibited, \ server Update Prohibited$
Dates	5,984 days old
Name Servers	NS-1349.AWSDNS-40.ORG (has 34,242 domains) NS-2016.AWSDNS-60.CO.UK (has 404 domains) NS-384.AWSDNS-48.COM (has 6,066 domains) NS-868.AWSDNS-44.NET (has 219 domains)
IP Address	157.240.3.174 - 7 other sites hosted on this server
IP Location	Washington - Seattle - Facebook Inc.
ASN	AS32934 FACEBOOK, US (registered Aug 24, 2004)
Domain Status	Registered And Active Website
IP History	390 changes on 390 unique IP addresses over 16 years
Registrar History	7 registrars with 1 drop
<b>Hosting History</b>	11 changes on 9 unique name servers over 16 years
Website Title	None given.
<b>Response Code</b>	349

## Whois Record (last updated on 2020-10-22)

```
Domain Name: instagram.com
Registry Domain ID: 121748357 DOMAIN COM-VRSN
Registrar WHOIS Server: whois.registrarsafe.com
Registrar URL: https://www.registrarsafe.com
        http://www.registrarsafe.com
Updated Date: 2018-03-01T19:43:29+00:00
        2018-03-01
Creation Date: 2004-06-04T13:37:18+00:00
        2004-06-04
Registrar Registration Expiration Date: 2027-06-04T13:37:18+00:00
        2027-06-04
Registrar: RegistrarSafe, LLC
Sponsoring Registrar IANA ID: 3237
Registrar Abuse Contact Email: abusecomplaints@registrarsafe.com
Registrar Abuse Contact Phone: 16503087004
Status:
        clientDeleteProhibited
        clientTransferProhibited
        clientUpdateProhibited
        serverDeleteProhibited
        serverTransferProhibited
        serverUpdateProhibited
Registry Registrant ID:
Registrant Name: REDACTED FOR PRIVACY (DT)
Registrant Organization: Instagram LLC
Registrant Street: 1601 Willow Rd
Registrant City: Menlo Park
Registrant State/Province: CA
Registrant Postal Code: 94025
Registrant Country: us
Registrant Phone: 16505434800
Nameservers:
       ns-1349.awsdns-40.org
        ns-2016.awsdns-60.co.uk
        ns-384.awsdns-48.com
        ns-868.awsdns-44.net
```

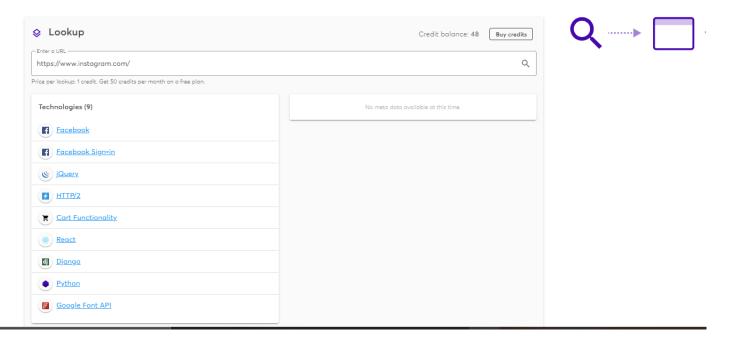
# Wappalyzer



#### Technology lookup

Find out what websites are built with

Instantly reveal the technology stack and contact details of any website, such as ecommerce platform, content management system or marketing automation tools.



#### Technologies Used are:

- Facebook
- Facebook Sign-in
- jQuery
- HTTP/2
- Cart Functionality
- React
- Django
- Python
- Google Font API

# **Netcraft**

### Background

Instagram
<u>23</u>
Create an account or log in to Instagram - A simple, fun & creative way to capture, edit & share photos, videos & messages with friends & family.
June 2014
Not Present
Norwegian

#### Network

Site	https://www.instagram.com
Netblock Owner	<u>Facebook, Inc.</u>
Hosting company	Facebook
Hosting country	<u>US</u>
IPv4 address	157.240.221.174 ( <u>VirusTotal</u> )
IPv4 autonomous systems	<u>A\$32934</u>
IPv6 address	2a03:2880:f258:e0:face:b00c:0:4420
IPv6 autonomous systems	<u>AS32934</u>
Reverse DNS	instagram-p42-shv-01-lhr8.fbcdn.net

Domain	<u>instagram.com</u>
Nameserver	ns-384.awsdns-48.com
Domain registrar	registrarsafe.com
Nameserver organisation	whois.markmonitor.com
Organisation	Instagram LLC, 1601 Willow Rd, Menlo Park, 94025, United States
DNS admin	awsdns-hostmaster@amazon.com
Top Level Domain	Commercial entities (.com)
DNS Security Extensions	unknown
Latest Performance	Performance Graph

### IP delegation

IPv4 address (157.240.221.174)

IP range	Country	Name	Description
0.0.0.0-255.255.255	N/A	IANA- BLK	The whole IPv4 address space
<b>Ļ</b> 157.0.0.0-157.255.255.255	United States	NET157	Various Registries (Maintained by ARIN)
157.240.0.0- 157.240.255.255	United States	THEFA-3	Facebook, Inc.
<b>L</b> 157.240.221.174	United States	THEFA-3	Facebook, Inc.

#### IPv6 address (2a03:2880:f258:e0:face:b00c:0:4420)

IP range	Country	Name	Description
::/0	N/A	ROOT	Root inet6num object
<b>L</b> 2a00::/11	European Unic	EU-ZZ-2A00	RIPE NCC
<b>L</b> , 2a00::/12	Netherlands	EU-ZZ-2A00	RIPE Network Coordination Centre
<b>L</b> , 2a03:2880::/29	Ireland	IE-FACEBOOK- 201100822	Facebook Ireland Ltd
, 2a03:2880:f258:e0:face:b00c:0:4420	Ireland	IE-FACEBOOK- 201100822	Facebook Ireland Ltd

#### SSL/TLS

State	California
Country	US
Validity period	From Oct 10 2020 to Jan 8 2021 (2 months, 4 weeks, 1 day)
Public key algorithm	rsaEncryption
Public key length	2048
Signature algorithm	sha256WithRSAEncryption
Serial number	0x08bdd3709afcb936c919790d6b96d1dc
Cipher	TLS_CHACHA20_POLY1305_SHA256
Version number	0x02

Supported TLS Extensions	RFC8446 supported versions, RFC8446 key share, RFC7301 application-layer protocol negotiation			
Application-Layer Protocol Negotiation	h2			
Next Protocol Negotiation	Not Present			
Issuing organisation	DigiCert Inc			
Issuer common name	DigiCert SHA2 High Assurance Server CA			
Issuer unit	www.digicert.com			
Issuer location	Not Present			
Issuer country	US			
Issuer state	Not Present			
Certificate Revocation Lists	http://crl3.digicert.com/sha2-ha-server-g6.crl http://crl4.digicert.com/sha2-ha-server-g6.crl			
Certificate Hash	VDsDTao5q/U1FilNCvToY4KqZ5Y			
Public Key Hash	1b61cfcb04f045161f530c4d65e3eeaeb17ca86d b54e184efe9b8c23005dfc5d			
OCSP servers	http://ocsp.digicert.com - 100% uptime in the p ast 24 hours			
OCSP stapling response	No response received			

## Certificate Transparency

Signed Certificate Timestamps (SCTs)

Source
--------

Google Argon 2021 91yUL9F3MCIUVBgIMJRWjuNNExkzv98MLyALzE7xZOM=
DigiCert Yeti 2021 XNxDkv7mq0VEsV6a1FbmEDf71fpH3KFz1LJe5vbHDso=

#### SSLv3/POODLE

This site does not support the SSL version 3 protocol.

More information about SSL version 3 and the POODLE vulnerability.

#### Heartbleed

The site offered the Heartbeat TLS extension prior to the Heartbleed disclosure, but is using a new certificate and no longer offers Heartbeat.

This test does not exploit the Heartbleed vulnerability but uses information from conventional HTTPS requests. <u>More information about Heartbleed detection</u>.

SSL Certificate Chain Hosting History

Netblock owner	IP address	os	Web server	Last seen
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.221.174	Linux	unknown	1-Oct-2020
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.1.174	Linux	unknown	15-Sep-2020
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.221.174	Linux	unknown	8-Sep-2020
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.1.174	Linux	unknown	24-Aug-2020

Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.221.174	Linux	unknown	16-Aug-2020
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.1.174	Linux	unknown	27-Jul-2020
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.221.174	Linux	unknown	20-Jul-2020
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.1.174	Linux	unknown	6-Jun-2020
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.221.174	Linux	unknown	3-Jun-2020
Facebook, Inc. 1601 Willow Rd. Menlo Park CA US 94025	157.240.1.174	Linux	unknown	20-May-2020

#### **Sender Policy Framework**

A host's Sender Policy Framework (SPF) describes who can send mail on its behalf. This is done by publishing an SPF record containing a series of <u>rules</u>. Each rule consists of a qualifier followed by a specification of which domains to apply this qualifier to. For more information please see <u>open-spf.org</u>.

Warning: It appears that this host does not have an SPF record. There may be an SPF record on instagram.com: Check the **site report**.

Setting up an SPF record helps prevent the delivery of forged emails from your domain. Please note that an SPF record will only protect the domain it is added to and not any <u>mail-enabled subdomains</u>. It is recommended to add an SPF record to any subdomain with an MX record.

#### **DMARC**

DMARC (Domain-based Message Authentication, Reporting and Conformance) is a mechanism for domain owners to indicate how mail purporting to originate from their domain should be authenticated. It builds on SPF and DKIM, providing a method to set policy and to give reporting of failures. For more information please see <a href="mailto:dmarc.org">dmarc.org</a>.

This host does not have a DMARC record. There may be a DMARC record on the site report for instagram.com: Check the <u>site report</u>.

#### **Web Trackers**

Web Trackers are third-party resources loaded onto a webpage. Trackable resources include social sharing widgets, javascript files, and images. These trackers can be used to monitor individual user behaviour across the web. Data derived from these trackers are primarily used for advertising or analytics purposes.

1 known tracker was identified.

#### Companies

• Facebook (1)

#### Categories

• Widget (1)

	Primary Category	Tracker	Popular Sites with this Tracker
Facebook	Widget	Instagram	www.movistar.es, www.rtl-theme.com, www.klatsch-tratsch.de

Site Technology (fetched 11 days ago)

Server-Side

Includes all the main technologies that Netcraft detects as running on the server such as PHP.

Technology	Description	
SSL	A cryptographic protocol providing communication security over the Internet	

#### Client-Side

Includes all the main technologies that run on the browser (such as JavaScript and Adobe Flash).

Technology	Description
Asynchronous Javascript	No description
JavaScript	Widely-supported programming language commonly used to power client-supported programming language programm

#### Character Encoding

A character encoding system consists of a code that pairs each character from a given repertoire with something else such as a bit pattern, sequence of natural numbers, octets, or electrical pulses in order to facilitate the transmission of data (generally numbers or text) through telecommunication networks or for data storage.

Technology	Description	Popular sites using this technology
UTF8	UCS Transformation Format 8 bit	googleads.g.doubleclick.net

#### HTTP Compression

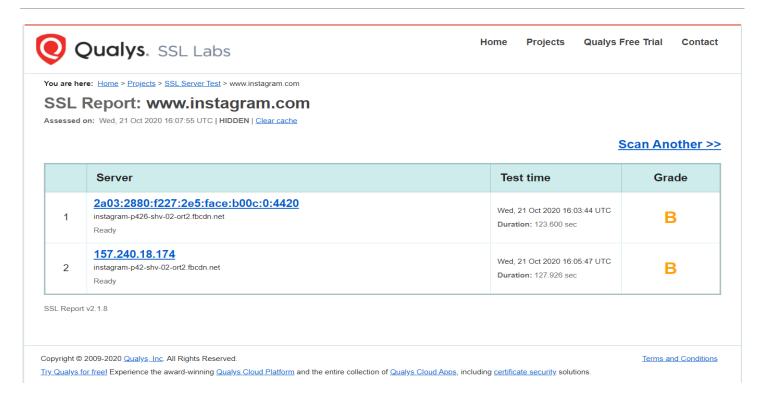
HTTP compression is a capability that can be built into web servers and web clients to make better use of available bandwidth, and provide greater transmission speeds between both.

Technology	Description	Popular sites using this technology
Gzip Content Encoding	Gzip HTTP Compression protocol	www.kinopoisk.ru, www.tsetmc.com, www.kali.org

#### Web Browser Targeting

Description
A meta-tag used in Internet Explorer 8 to enable compatibility mode
Browser MIME type sniffing is disabled
Web security policy mechanism whereby a web server declares that compuser agents are to interact with it using only secure HTTP connections
Cross-site scripting protection is disabled
Do not allow this site to be rendered within an iframe
Detect, mitigate and report attacks in the browser
Detect and mitigate attacks in the browser

# **Qualys SSL LAB Test**



### Instagram ping & Nmap results in Kali Linux Terminals



#### **NETWORK WhoisRecord**

Queried whois.ripe.net with "-B 31.13.93.174"...

% Information related to '31.13.64.0 - 31.13.127.255'

```
% Abuse contact for '31.13.64.0 - 31.13.127.255' is 'domain@fb.com'
inetnum: 31.13.64.0 - 31.13.127.255
                        IE-FACEBOOK-20110418
netname:
                        ΙE
country:
                       ORG-FIL7-RIPE
admin-c:
tech-c:
                      RD4299-RIPE
                       RD4299-RIPE
tech-c:
                       ALLOCATED PA
RIPE-NCC-HM-MNT
status: ALLOCATED PA
mnt-by: RIPE-NCC-HM-MNT
mnt-by: fb-neteng
mnt-routes: fb-neteng
notify: neteng@fb.com
created: 2011-04-18T12:00:34Z
status:
last-modified: 2019-02-19T23:15:54Z
source:
                         RIPE
organisation: ORG-FIL7-RIPE
org-name: Facebook Ireland Ltd
                     LIR
4 GRAND CANAL SQUARE , GRAND CANAL HARBOUR ,
org-type:
address:
                       D2
address: D2
address: Dublin
address: IRELAND
phone: +0016505434800
fax-no: +0016505435325
e-mail: domain@fb.com
admin-c: PH4972-RIPE
mnt-ref: RIPE-NCC-HM-MNT
mnt-ref: fb-neteng
mnt-by: RIPE-NCC-HM-MNT
mnt-by: fb-neteng
abuse-c: RD4299-RIPE
created: 2011-04-07T13:16:292
last-modified: 2019-02-19T23:15:557
address:
last-modified: 2019-02-19T23:15:55Z
source: RIPE
role: RIPE DBM
address: 1601 Willow Rd.
address: Menlo Park, CA, 94025
e-mail: noc@fb.com
admin-c: PH4972-RIPE
tech-c: PH4972-RIPE
                       PH4972-RIPE
tech-c:
nic-hdl: RD4299-RIPE
mnt-by: fb-neteng created: 2011-04-11T18:49:50Z last-modified: 2013-08-14T15:49:58Z
source: RIPE
abuse-mailbox: domain@fb.com
% This query was served by the RIPE Database Query Service version 1.98 (HEREFORD)
```

#### Tracing route to www.instagram.com [31.13.93.174] ...

Нор	rtt	rtt	rtt	ip address	fully qualified domain name
1	1	1	1	169.254.158.58	
2	1	1	1	169.48.118.160	ae103.ppr03.dal13.networklayer.com
3	2	0	0	169.48.118.132	84.76.30a9.ip4.static.sl-reverse.com
4	*	*	6	169.45.18.90	ae16.cbs02.eq01.dal03.networklayer.com
5	2	1	1	50.97.17.59	ae34.bbr02.eq01.dal03.networklayer.com
6	1	5	2	50.97.16.169	a9.10.6132.ip4.static.sl-reverse.com
7	1	1	1	157.240.40.253	po101.psw01.dfw5.tfbnw.net
8	1	1	1	157.240.39.63	
9	1	1	1	31.13.93.174	instagram-p42-shv-02-dfw5.fbcdn.net

#### Trace complete

#### **Service scan**

FTP - 21 Error: TimedOut

SMTP - 25 Error: TimedOut

HTTP - 80 HTTP/1.1 301 Moved Permanently

Location: https://www.instagram.com/

Content-Type: text/plain
Server: proxygen-bolt
X-FB-TRIP-ID: 1679558926

Alt-Svc: h3-29=":443"; ma=3600,h3-27=":443"; ma=3600

Date: Thu, 22 Oct 2020 11:58:48 GMT

Connection: close
Content-Length: 0

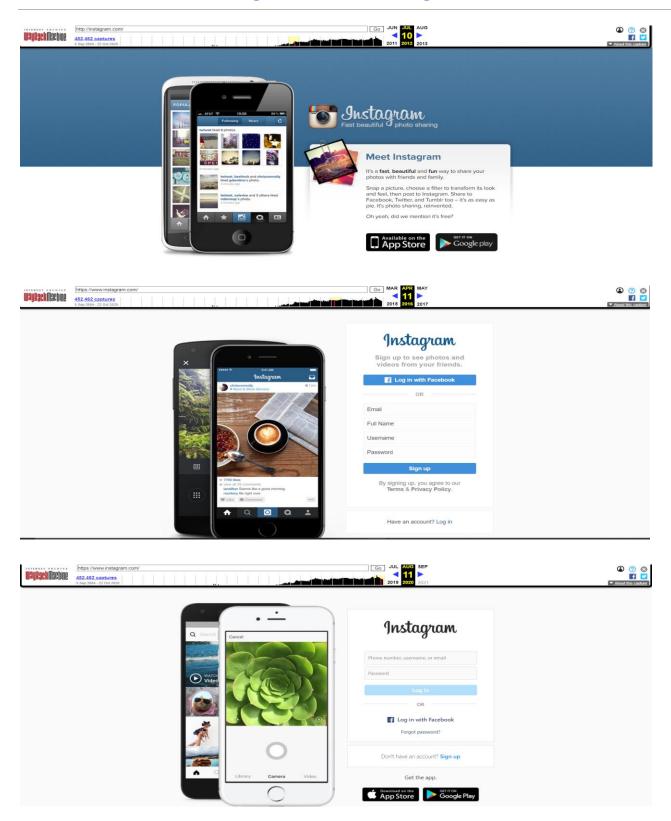
#### POP3 - 110 Error: TimedOut

#### IMAP - 143 Error: TimedOut

```
Certificate validation errors: None
HTTPS -
            Signature algorithm: sha256RSA
443
            Public key size: 2048 bits
            Issuer: CN=DigiCert SHA2 High Assurance Server CA, OU=www.digicert.com,
            O=DigiCert Inc, C=US
            Subject: CN=*.www.instagram.com, O="Facebook, Inc.", L=Menlo Park,
            S=California, C=US
            Subject Alternative Name: DNS Name=*.www.instagram.com, DNS
            Name=www.instagram.com
            Serial number: 08BDD3709AFCB936C919790D6B96D1DC
            Not valid before: 2020-10-10 00:00:00Z
            Not valid after: 2021-01-08 12:00:00Z
            SHA1 fingerprint: E83280132E959894DE78C5C029006F6E9EE3EAF6
            HTTP/1.1 200 OK
            Content-Type: text/html; charset=utf-8
            Vary: Cookie, Accept-Language, Accept-Encoding
            Content-Language: en
            Date: Thu, 22 Oct 2020 11:58:52 GMT
            Strict-Transport-Security: max-age=31536000
            Cache-Control: private, no-cache, no-store, must-revalidate
            Pragma: no-cache
            Expires: Sat, 01 Jan 2000 00:00:00 GMT
            X-Frame-Options: SAMEORIGIN
            content-security-policy: report-uri
            https://www.instagram.com/security/csp report/; default-src 'self'
            https://www.instagram.com; img-src data: blob: https://*.fbcdn.net
            https://*.instagram.com https://*.cdninstagram.com https://*.facebook.com
            https://*.giphy.com; font-src data: https://*.fbcdn.net
            https://*.instagram.com https://*.cdninstagram.com; media-src 'self' blob:
            https://www.instagram.com https://*.cdninstagram.com https://*.fbcdn.net;
            manifest-src 'self' https://www.instagram.com; script-src 'self'
            https://instagram.com https://www.instagram.com https://*.www.instagram.com
            https://*.cdninstagram.com wss://www.instagram.com https://*.facebook.com
            https://*.fbcdn.net https://*.facebook.net 'unsafe-inline' 'unsafe-eval'
            blob:; style-src 'self' https://*.www.instagram.com
            https://www.instagram.com 'unsafe-inline'; connect-src 'self'
            https://instagram.com https://www.instagram.com https://*.www.instagram.com
```

```
https://graph.instagram.com https://*.graph.instagram.com
https://*.cdninstagram.com https://api.instagram.com https://i.instagram.com
wss://www.instagram.com wss://edge-chat.instagram.com https://*.facebook.com
https://*.fbcdn.net https://*.facebook.net chrome-
extension://boadgeojelhgndaghljhdicfkmllpafd blob:; worker-src 'self' blob:
https://www.instagram.com; frame-src 'self' https://instagram.com
https://www.instagram.com https://staticxx.facebook.com
https://www.facebook.com https://web.facebook.com
https://connect.facebook.net https://m.facebook.com; object-src 'none';
upgrade-insecure-requests
X-Content-Type-Options: nosniff
X-XSS-Protection: 0
x-aed: 24
Access-Control-Expose-Headers: X-IG-Set-WWW-Claim
Set-Cookie: sessionid=""; Domain=instagram.com; expires=Thu, 01-Jan-1970
00:00:00 GMT; Max-Age=0; Path=/
Set-Cookie: sessionid=""; Domain=.instagram.com; expires=Thu, 01-Jan-1970
00:00:00 GMT; Max-Age=0; Path=/
Set-Cookie: sessionid=""; Domain=i.instagram.com; expires=Thu, 01-Jan-1970
00:00:00 GMT; Max-Age=0; Path=/
Set-Cookie: sessionid=""; Domain=.i.instagram.com; expires=Thu, 01-Jan-1970
00:00:00 GMT; Max-Age=0; Path=/
Set-Cookie: sessionid=""; Domain=www.instagram.com; expires=Thu, 01-Jan-1970
00:00:00 GMT; Max-Age=0; Path=/
Set-Cookie: sessionid=""; Domain=.www.instagram.com; expires=Thu, 01-Jan-
1970 00:00:00 GMT; Max-Age=0; Path=/
Set-Cookie: sessionid=""; expires=Thu, 01-Jan-1970 00:00:00 GMT; Max-Aqe=0;
Path=/
Set-Cookie: iq did=FCE3EBF8-0BBB-4CAC-ABE8-0A2B3F552226;
Domain=.instagram.com; expires=Sat, 22-Oct-2022 11:58:52 GMT; HttpOnly; Max-
Age=63072000; Path=/; Secure
Set-Cookie: csrftoken=GTlWMQNbyeXy9ITRt1xs6dbLHZLcUAqt;
Domain=.instagram.com; expires=Thu, 21-Oct-2021 11:58:52 GMT; Max-
Age=31449600; Path=/; Secure
Set-Cookie: mid=X5Fz AAEAAHtM8EygGczQI4mVBDq; Domain=.instagram.com;
expires=Sat, 22-Oct-2022 11:58:52 GMT; Max-Age=63072000; Path=/; Secure
Set-Cookie: ig nrcb=1; Domain=.instagram.com; expires=Fri, 22-Oct-2021
11:58:52 GMT; Max-Age=31536000; Path=/; Secure
X-FB-TRIP-ID: 1679558926
Alt-Svc: h3-29=":443"; ma=3600,h3-27=":443"; ma=3600
Connection: close
Content-Length: 45079
```

# Screenshots of Instagram Homepage In recent few years



#### **Contact Information**

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Batch:	Cybersecurity Sep-Oct 2020

#### Project Abstract

This report includes Passive info gathering and active information gathering on Instagram.

- Its IP address, name servers, etc. is copied from Whois.domaintools.com.
- Technology tools copied from WAPPALYZER
- Network, IP, SSL/TLS, Certificate, Heartbleed information from NETCRAFT
- Qualys SSL LAB Test
- Ping & nmap results in Kali Linux Terminal
- Network WhoisRecord, Traceroute, Port Service Scan
- Screenshots of previous and latest homepages of Instagram
- The MALTEGO Graph of Instagram file is attached in mail.