Instagram Login Page Deployment on Amazon Linux EC2 (Amazon Linux + NGINX + Login Page)

Overview

This guide explains how to deploy a production-ready Instagram-style login page on an Amazon Linux EC2 instance. The deployment uses

- Amazon Linux 2023 – lightweight, secure Linux server
- Nginx – high-performance web server
- HTML/CSS – modern Instagram-inspired front-end design
- Systemd – ensures Nginx auto-starts on reboot
- AWS Security Groups – to allow HTTP/SSH access

Project: Instagram Login Page Deployment on Amazon Linux EC2

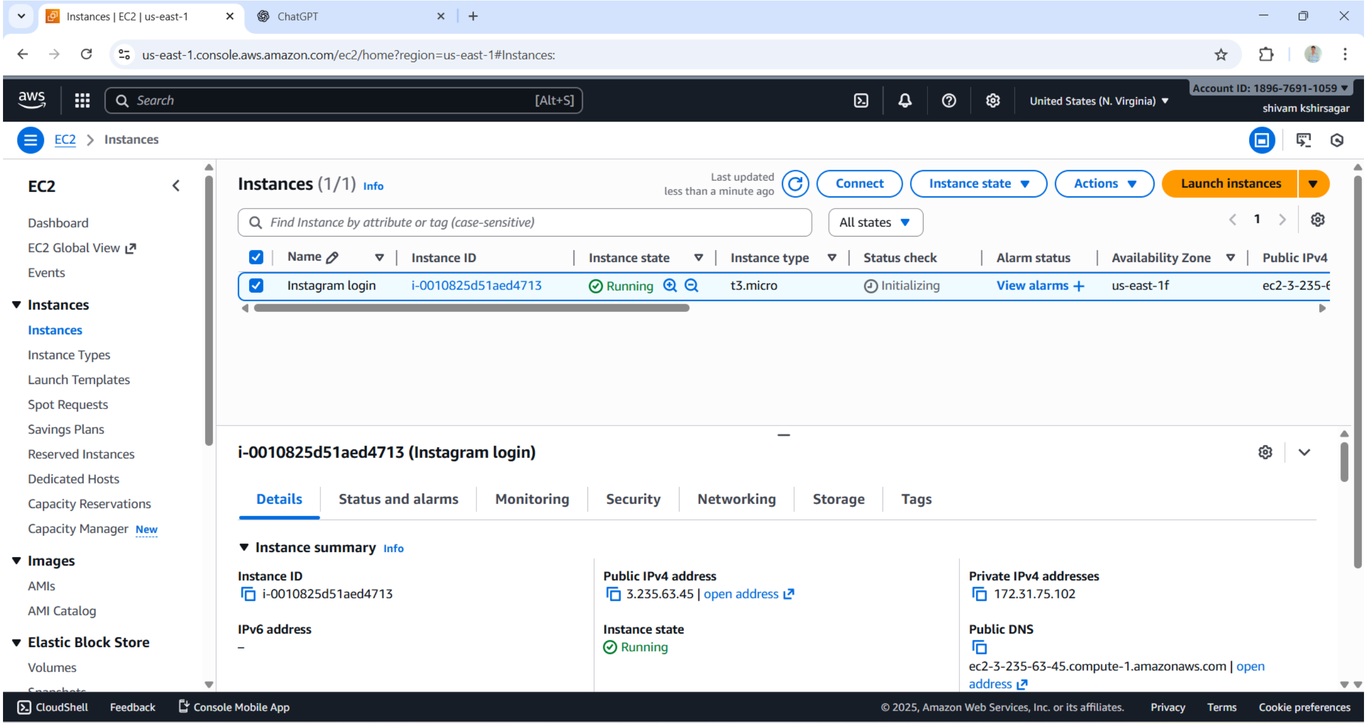
Step-by-Step Deployment Guide

- # 1: Launch Amazon Linux EC2 Instance

Theory: We are creating a cloud server (EC2 instance) to host our login page and allow public access via browser.

- Go to AWS Console → EC2 → Launch Instance
- Select Amazon Linux 2023 AMI
- Choose t3.micro (Free Tier)
- Configure Key Pair (create new or use existing) for SSH access
- Configure Security Group:
  - SSH → Port 22 → Source: My IP
  - HTTP → Port 80 → Source: Anywhere

Screenshot



☑	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
☑	Instagram login	i-0010825d51aed4713	Running	t3.micro	Initializing	View alarms +	us-east-1f	ec2-3-235-6

i-0010825d51aed4713 (Instagram login)

Instance ID
i-0010825d51aed4713

Public IPv4 address
3.235.63.45 | open address

Private IPv4 addresses
172.31.75.102

IPv6 address
–

Instance state
Running

Public DNS
ec2-3-235-63-45.compute-1.amazonaws.com | open address

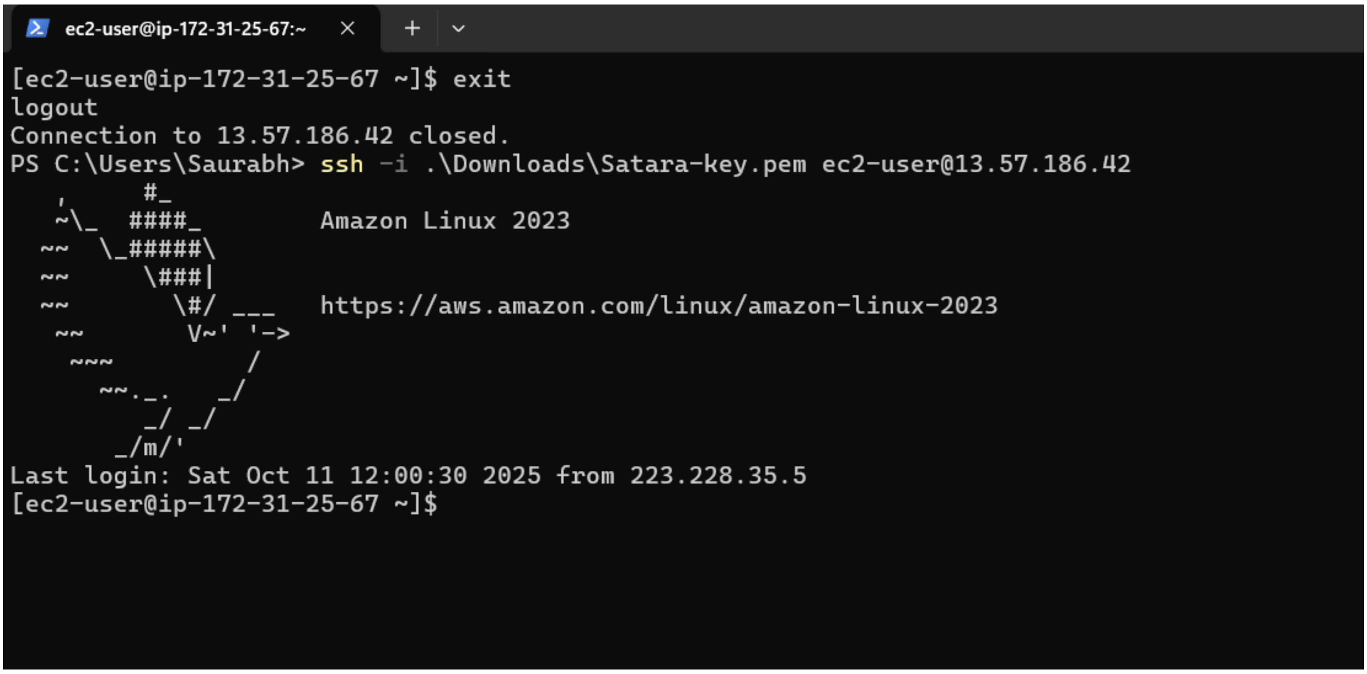
2: Connect to EC2 via SSH

Theory: SSH connection allows you to remotely manage the EC2 instance from your local machine.

Commands:

```
ssh -i "Your_key" ec2-user@<your-ec2-ip>
```

Screenshot



```
[ec2-user@ip-172-31-25-67 ~]$ exit
logout
Connection to 13.57.186.42 closed.
PS C:\Users\Saurabh> ssh -i .\Downloads\Satara-key.pem ec2-user@13.57.186.42
   ,     #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
Last login: Sat Oct 11 12:00:30 2025 from 223.228.35.5
[ec2-user@ip-172-31-25-67 ~]$
```

3: Install and Start NGINX

Theory: NGINX is a web server that serves our HTML/CSS login page; enabling it ensures it starts automatically on reboot.

Commands:

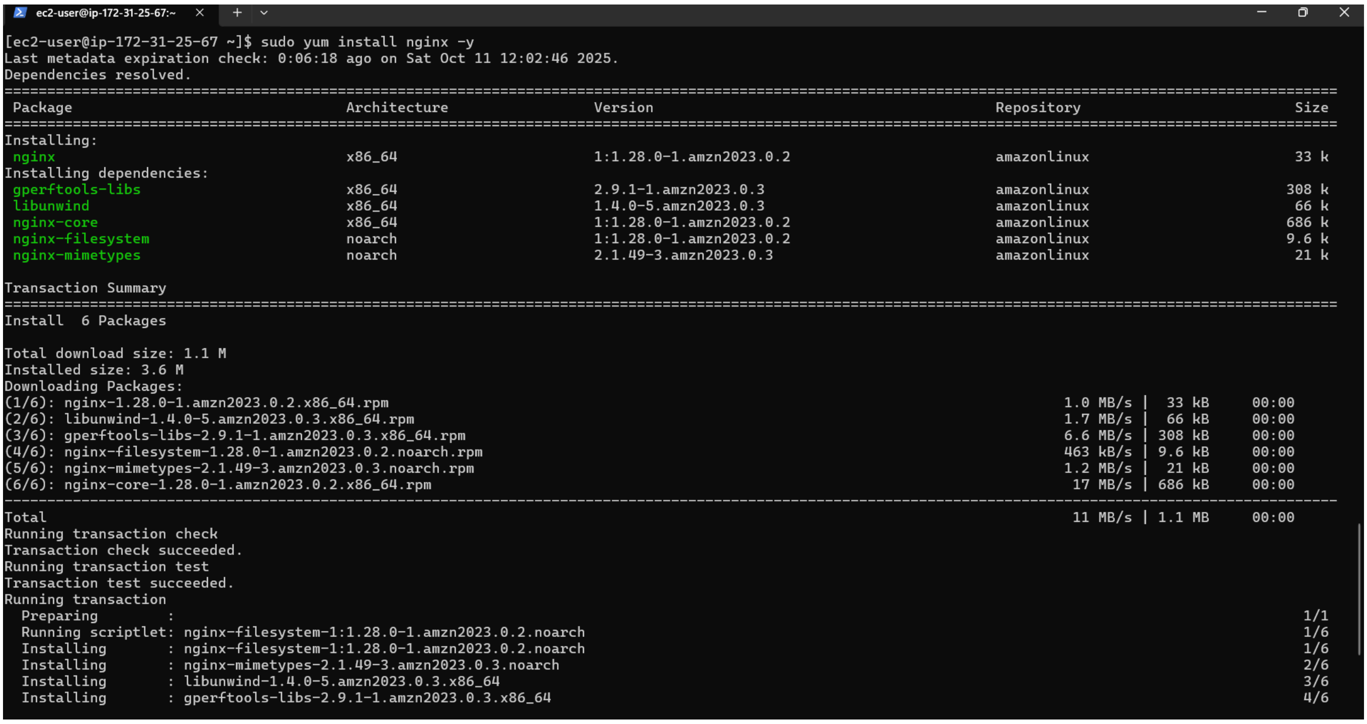
```
    sudo yum update -y

    sudo yum install nginx -y

    sudo systemctl start nginx

    sudo systemctl enable nginx
```

Screenshot



```
[ec2-user@ip-172-31-25-67 ~]$ sudo yum install nginx -y
Last metadata expiration check: 0:06:18 ago on Sat Oct 11 12:02:46 2025.
Dependencies resolved.
=============================================================================================================================================================
 Package                                Architecture                 Version                                        Repository                          Size
=============================================================================================================================================================
Installing:
 nginx                                  x86_64                       1:1.28.0-1.amzn2023.0.2                        amazonlinux                         33 k
Installing dependencies:
 gperftools-libs                        x86_64                       2.9.1-1.amzn2023.0.3                           amazonlinux                        308 k
 libunwind                              x86_64                       1.4.0-5.amzn2023.0.3                           amazonlinux                         66 k
 nginx-core                             x86_64                       1:1.28.0-1.amzn2023.0.2                        amazonlinux                        686 k
 nginx-filesystem                       noarch                       1:1.28.0-1.amzn2023.0.2                        amazonlinux                        9.6 k
 nginx-mimetypes                        noarch                       2.1.49-3.amzn2023.0.3                          amazonlinux                         21 k

Transaction Summary
=============================================================================================================================================================
Install  6 Packages

Total download size: 1.1 M
Installed size: 3.6 M
Downloading Packages:
(1/6): nginx-1.28.0-1.amzn2023.0.2.x86_64.rpm                                                                                1.0 MB/s |  33 kB     00:00
(2/6): libunwind-1.4.0-5.amzn2023.0.3.x86_64.rpm                                                                             1.7 MB/s |  66 kB     00:00
(3/6): gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64.rpm                                                                       6.6 MB/s | 308 kB     00:00
(4/6): nginx-filesystem-1.28.0-1.amzn2023.0.2.noarch.rpm                                                                     463 kB/s | 9.6 kB     00:00
(5/6): nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch.rpm                                                                      1.2 MB/s |  21 kB     00:00
(6/6): nginx-core-1.28.0-1.amzn2023.0.2.x86_64.rpm                                                                            17 MB/s | 686 kB     00:00
-------------------------------------------------------------------------------------------------------------------------------------------------------------
Total                                                                                                                         11 MB/s | 1.1 MB     00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                                                                                                     1/1
  Running scriptlet: nginx-filesystem-1:1.28.0-1.amzn2023.0.2.noarch                                                                                     1/6
  Installing       : nginx-filesystem-1:1.28.0-1.amzn2023.0.2.noarch                                                                                     1/6
  Installing       : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch                                                                                        2/6
  Installing       : libunwind-1.4.0-5.amzn2023.0.3.x86_64                                                                                               3/6
  Installing       : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64                                                                                         4/6
```

4: Deploy Instagram Login Page

Theory: We replace the default NGINX page with our custom Instagram login page so it can be accessed via browser.

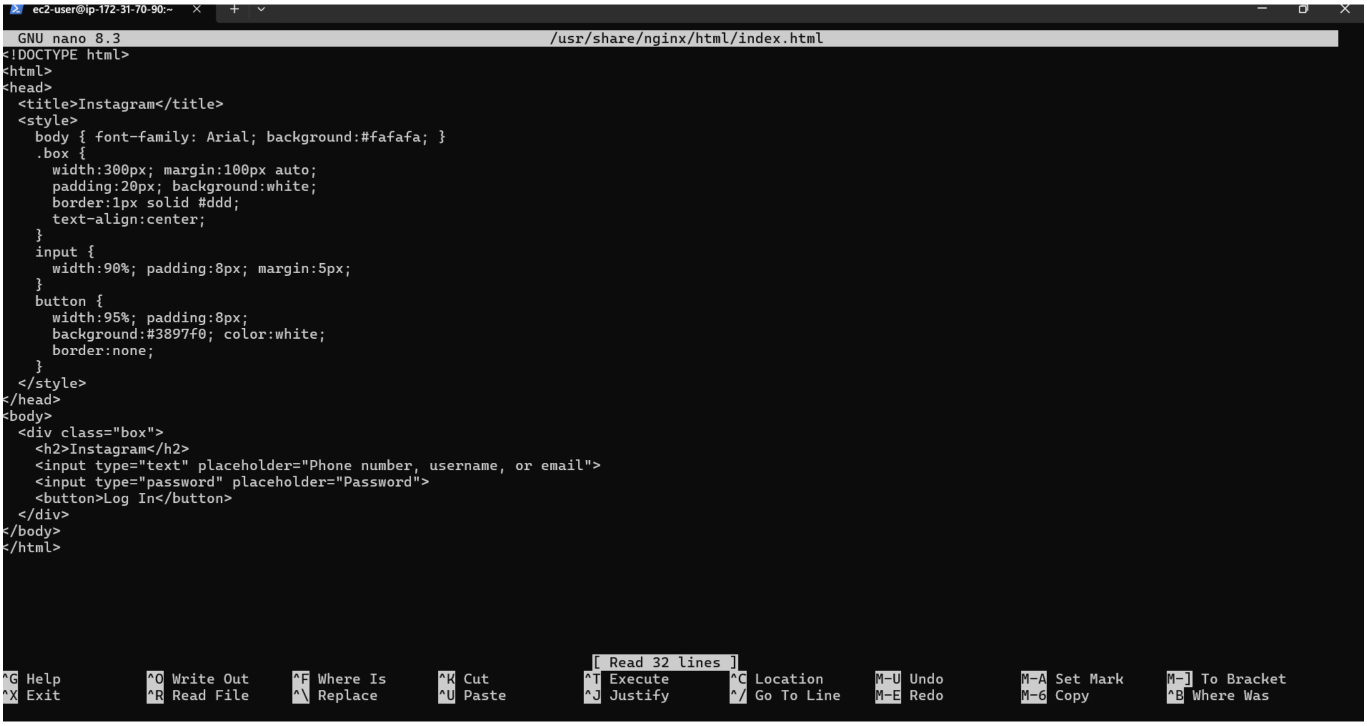
Commands:

```
sudo nano /usr/share/nginx/html/index.html

* Paste the Instagram HTML/CSS

* Save and exit.
```

Screenshot



```
  GNU nano 8.3                                  /usr/share/nginx/html/index.html
<!DOCTYPE html>
<html>
<head>
  <title>Instagram</title>
  <style>
    body { font-family: Arial; background:#fafafa; }
    .box {
      width:300px; margin:100px auto;
      padding:20px; background:white;
      border:1px solid #ddd;
      text-align:center;
    }
    input {
      width:90%; padding:8px; margin:5px;
    }
    button {
      width:95%; padding:8px;
      background:#3897f0; color:white;
      border:none;
    }
  </style>
</head>
<body>
  <div class="box">
    <h2>Instagram</h2>
    <input type="text" placeholder="Phone number, username, or email">
    <input type="password" placeholder="Password">
    <button>Log In</button>
  </div>
</body>
</html>




                                                                              [ Read 32 lines ]
^G Help         ^O Write Out    ^F Where Is     ^K Cut          ^T Execute      ^C Location     M-U Undo        M-A Set Mark    M-] To Bracket
^X Exit         ^R Read File    ^\ Replace      ^U Paste        ^J Justify      ^/ Go To Line   M-E Redo        M-6 Copy        ^B Where Was
```

5: Set File Permissions

Theory: Allows Nginx to read website files

Commands:

```
* sudo chown -R nginx:nginx /usr/share/nginx/html
```

6: Restart Nginx

Theory: Applies all changes by restarting Nginx.

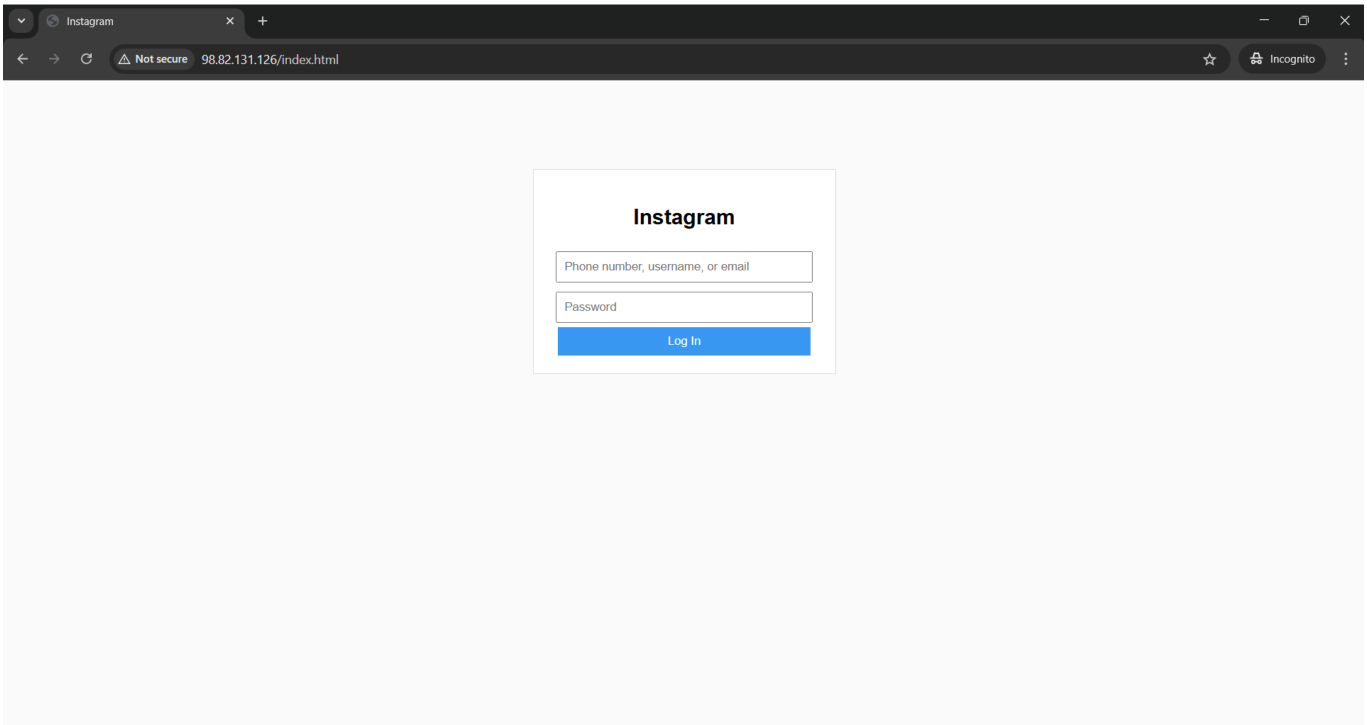
Commands:

```
* sudo systemctl restart nginx
```

7: Access Website

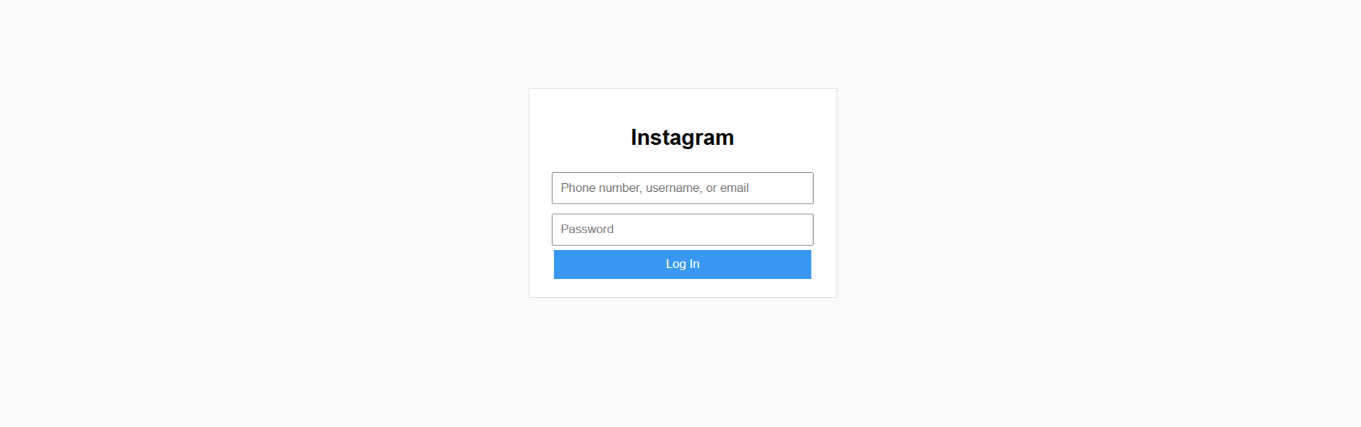
Theory: Access the deployed website using EC2 public IP.

```
 * http://EC2_PUBLIC_IP
```



Deployment Success

Theory: The Instagram login page is successfully displayed in the browser using the EC2 public IP address.


Instagram
Phone number, username, or email
Password
Log In