

DEPLOY THE PYTHON BASED APPLICATION

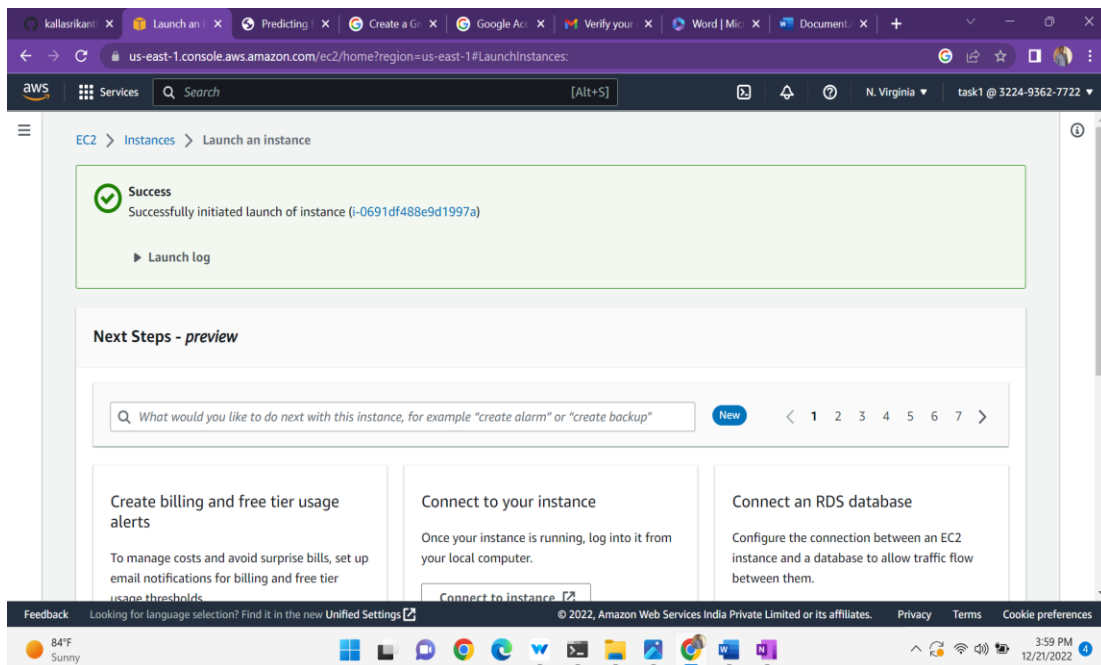
SIGN into the aws console and create an ec2 instance with the ubuntu server and give the customized vpc and security group are

SSH-22

HTTP-443

HTTPS-8080

TCP-7070,8000



Connect the ec2 instance with the terminal and update the system with the help of the command

----> `sudo apt update`

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\91916> cd .\Downloads\
PS C:\Users\91916\Downloads> ssh -i "esi.pem" ubuntu@54.160.159.81
The authenticity of host '54.160.159.81 (54.160.159.81)' can't be established.
ECDSA key fingerprint is SHA256:+jV++/tQ0ifsV1W6nZl6puL1533x0ogjptJ4bU413MA.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '54.160.159.81' (ECDSA) to the list of known hosts.
```

```
Get:12 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [114 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [768 kB]
Get:14 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [7388 B]
Get:15 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [460 kB]
Get:16 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [70.5 kB]
Get:17 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [532 B]
Get:18 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [622 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [172 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [11.5 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [498 kB]
Get:22 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [82.9 kB]
Get:23 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [11.0 kB]
Get:24 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [4268 B]
Get:25 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [972 B]
Get:26 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [76.3 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [532 B]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [767 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [130 kB]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [14.2 kB]
Get:32 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [7300 B]
Get:33 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [2432 B]
Get:34 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [420 B]
Get:35 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [3324 B]
Get:36 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [1580 B]
Get:37 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [272 B]
Get:38 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:39 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [6740 B]
Get:40 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [9460 B]
Get:41 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [348 B]
Get:42 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
91% [5 Packages store 0 B]
```

After upgrade the packages in the ubuntu machine with the help of the command

Sudo apt-get full-upgrade -y

```
Windows PowerShell  x  ubuntu@ip-192-168-144-247:  +  v
ubuntu@ip-192-168-144-247:~$ sudo apt-get full-upgrade -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following packages will be upgraded:
  apport binutils binutils-common binutils-x86-64-linux-gnu ca-certificates cloud-init initscripts initscripts-tools-bin
  initscripts-tools-core libbinutils libbpf0 libbtf-nobfd0 libbtf0 libpython3.10 libpython3.10-minimal libpython3.10-stdlib libxml2
  python3-apport python3-distupgrade python3-problem-report python3-tz python3.10 python3.10-minimal tmux tzdata
  ubuntu-release-upgrader-core
26 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
Need to get 13.6 MB of archives.
After this operation, 138 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libpython3.10 amd64 3.10.6-1~22.04.2 [1955 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3.10 amd64 3.10.6-1~22.04.2 [497 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libpython3.10-stdlib amd64 3.10.6-1~22.04.2 [1832 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3.10-minimal amd64 3.10.6-1~22.04.2 [2251 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libpython3.10-minimal amd64 3.10.6-1~22.04.2 [810 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 ca-certificates all 20211016ubuntu0.22.04.1 [144 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libbpf0 amd64 1:0.5.0-1ubuntu22.04.1 [140 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libxml2 amd64 2.9.13+dfsg-1ubuntu0.2 [764 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 tzdata all 2022g-0ubuntu0.22.04.1 [333 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 ubuntu-release-upgrader-core all 1:22.04.15 [26.2 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3-distupgrade all 1:22.04.15 [107 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3-problem-report all 2.20.11-0ubuntu82.3 [11.0 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3-apport all 2.20.11-0ubuntu82.3 [88.0 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apport all 2.20.11-0ubuntu82.3 [133 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libbtf-nobfd0 amd64 2.38-4ubuntu2.1 [103 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libbtf0 amd64 2.38-4ubuntu2.1 [107 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 binutils-x86-64-linux-gnu amd64 2.38-4ubuntu2.1 [2328 kB]
84°F Sunny 412 PM 12/21/2022
```

And then install the python in the ubuntu machine

Pip3 is the official package manager and pip command for python3 .it enables the installation and management of third party software packages with features and functionality not found in the python standard library.

```
Windows PowerShell  x  ubuntu@ip-192-168-144-247:  +  v
ubuntu@ip-192-168-144-247:~$ sudo apt-get install python3-pip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  build-essential bzip2 cpp cpp-11 dpkg-dev fakeroot fontconfig-config fonts-dejavu-core g++ g++-11 gcc gcc-11 gcc-11-base
  javascript-common libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libasan6 libatomic1 libc-dev-bin
  libc-devtools libc6-dev libcc1-0 libcrypt-dev libdeflate0 libdpkg-perl libexpat1-dev libfakeroot libfile-fcntllock-perl
  libfontconfig1 libgcc-11-dev libgd3 libgomp1 libisl23 libitm1 libjbig0 libjpeg-turbo8 libjpeg8 libjs-jquery libjs-sphinxdoc
  libjs-underscore liblsan0 libmpc3 libnsl-dev libpython3-dev libpython3.10-dev libquadmath0 libstdc++-11-dev libtiff5 libtirpc-dev
  libtsan0 libubsan1 libwebp7 libxpm4 linux-libc-dev lto-disabled-list make manpages-dev python3-dev python3-wheel python3.10-dev
  rpcsvc-proto zlib1g-dev
Suggested packages:
  bzip2-doc cpp-doc gcc-11-locales debian-keyring g++-multilib g++-11-multilib gcc-11-doc gcc-multilib autoconf automake libtool
  flex bison gdb gcc-doc gcc-11-multilib apache2 | lighttpd | httpd glibc-doc bsr libgd-tools libstdc++-11-doc make-doc
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```

And clone the code from the repository by using

Git clone <https://github.com/anudeepreddy77/penguin-git>

```
Windows PowerShell  x  ubuntu@ip-192-168-144-247:  x  +  v
ubuntu@ip-192-168-144-247:~$ git clone https://github.com/anudeepreddy77/Penguin-.git
Cloning into 'Penguin-...'
remote: Enumerating objects: 10758, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 10758 (delta 0), reused 0 (delta 0), pack-reused 10755
Receiving objects: 100% (10758/10758), 81.28 MiB | 19.84 MiB/s, done.
Resolving deltas: 100% (813/813), done.
Updating files: 100% (10268/10268), done.
ubuntu@ip-192-168-144-247:~$
```

And go to the directory install the required packages and run the flask server

--> pip3 install -r requirements.txt

--> python3 app.py

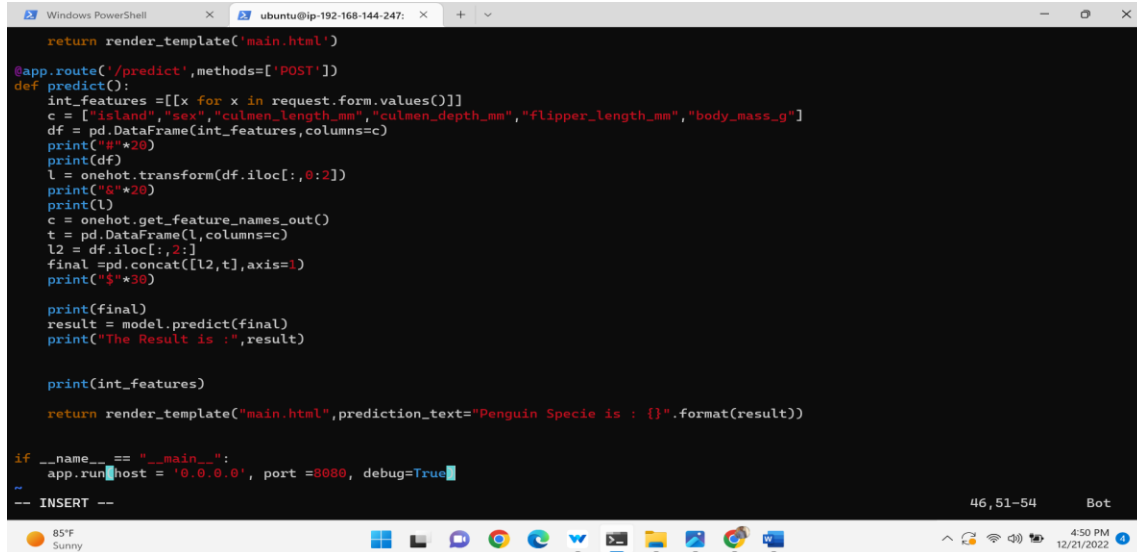
```
Windows PowerShell  x  ubuntu@ip-192-168-144-247:  x  +  v
ubuntu@ip-192-168-144-247:~/Penguin-$ python3 app.py
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:8000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 198-744-192
|
```

Here, after running python3 app.py it will generate local host ip address we can't access web app with that ip address then here we want to edit the file app.py with some details.

Sudo vi app.py

Go to the very bottom of the file and paste the following text and save the file

```
App.run(host='0.0.0.0', port=8080, debug=True)
```



```
return render_template('main.html')

@app.route('/predict',methods=['POST'])
def predict():
    int_features = [[x for x in request.form.values()]]
    c = ["island","sex","culmen_length_mm","culmen_depth_mm","flipper_length_mm","body_mass_g"]
    df = pd.DataFrame(int_features,columns=c)
    print("$"*20)
    print(df)
    l = onehot.transform(df.iloc[:,0:2])
    print("$"*20)
    print(l)
    c = onehot.get_feature_names_out()
    t = pd.DataFrame(l,columns=c)
    l2 = df.iloc[:,2:]
    final =pd.concat([l2,t],axis=1)
    print("$"*30)

    print(final)
    result = model.predict(final)
    print("The Result is :",result)

    print(int_features)

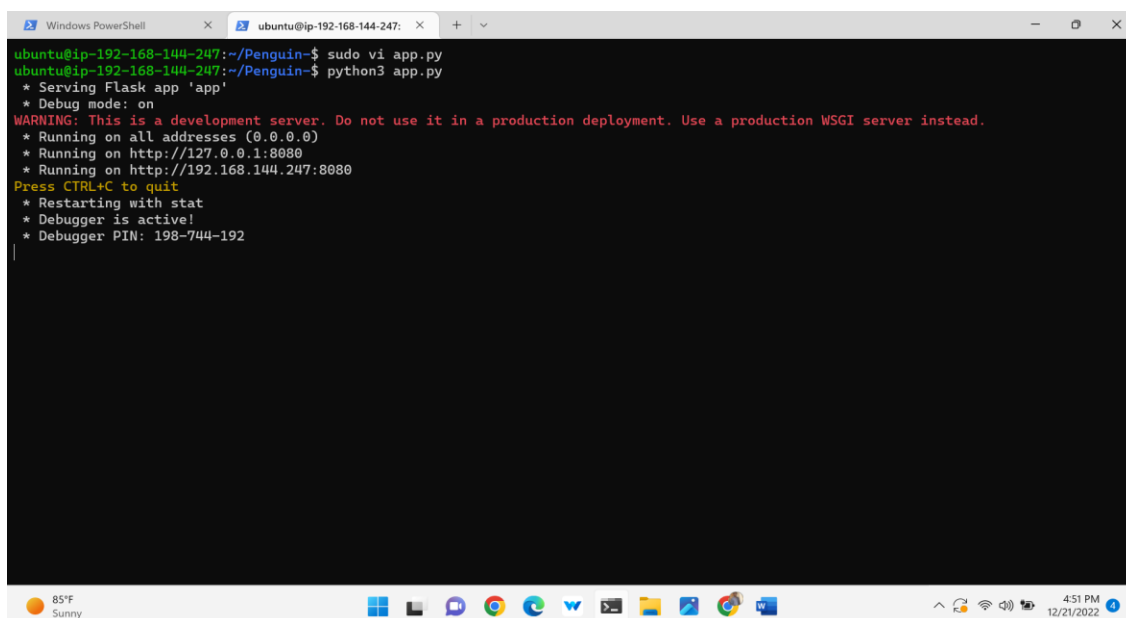
    return render_template("main.html",prediction_text="Penguin Specie is : {}".format(result))

if __name__ == "__main__":
    app.run(host = '0.0.0.0', port =8080, debug=True)

-- INSERT --
```

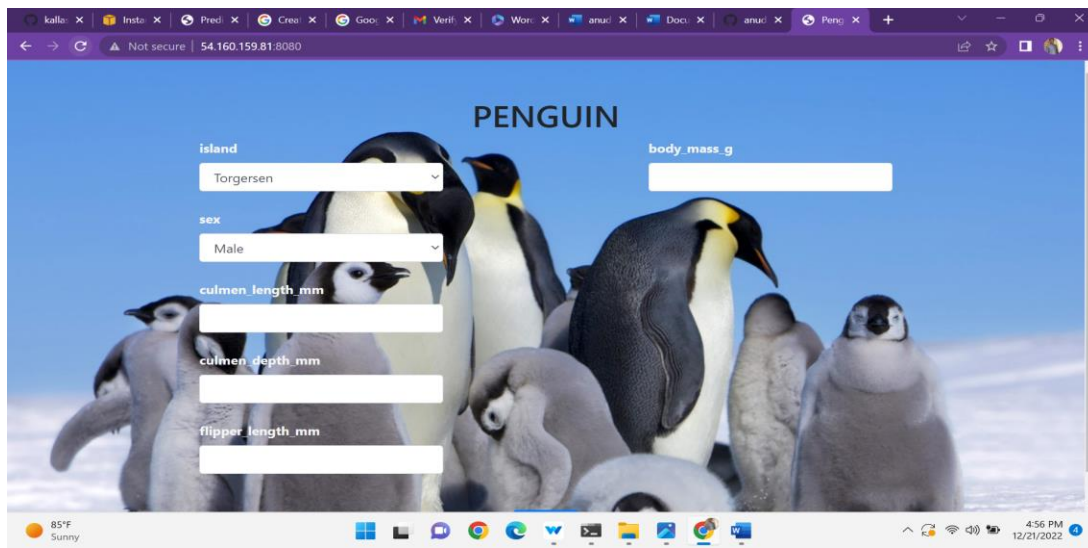
Now again run the flask server by using the below command

Python3 app.py



```
ubuntu@ip-192-168-144-247:~/Penguin$ sudo vi app.py
ubuntu@ip-192-168-144-247:~/Penguin$ python3 app.py
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:8080
* Running on http://192.168.144.247:8080
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 198-744-192
```

Copy the public ip adress and paste it on terminal with required port number



And again clone the medical repository

Go to that directory install the requirements .txt

Run the flask server

Edit the sudo vi app.py


And again run python3 app.py

Copy the public ip adress and paste it on the browser



Browser tabs: kallas, Insta, Predi, Creat, Googl, Verifi, Word, anud, Docu, anud, Peng, Docu, An x

Not secure | 54.160.159.81:7000



Anudeep Reddy

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Hey I'm Anudeep Reddy

a passionate Data Scientist

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Not secure | 54.160.159.81:8080

USA House Price Prediction

Avg. Area Income

Avg. Area House Age

Avg. Area Number of Rooms

Avg. Area Number of Bedrooms

Area Population

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Browser tabs: kallas, Insta, Predi, Creat, Googl, Verifi, Word, anud, Docu, anud, Peng, Docu, Anadi, Fe x

Not secure | 54.160.159.81:7070

Home Contact Service

Fuel Consumption

Make
Acura

Model

Vehicle Class
Compact


Transmission
AM8

Engine Size

Cylinders

CO2

SmokeRate



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