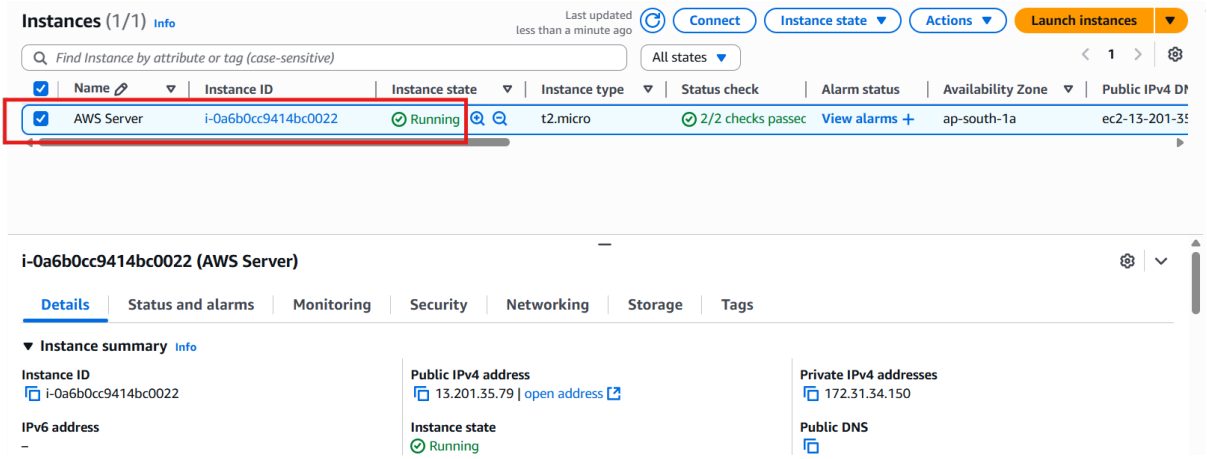
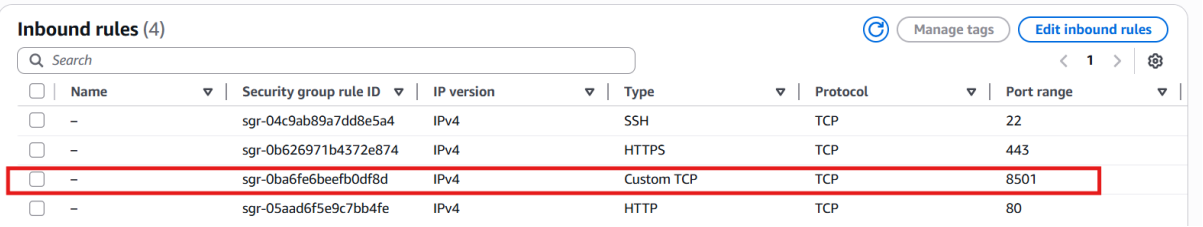
ATS Web App Using Python, AI & Streamlit

Detailed Steps:--

Create an EC2 instance:



Edit and add custom port in inbound rules (as 8501 is the default port for streamlit):



Now update packages, install python and create a venv:

```
ubuntu@ip-172-31-34-150:~$
ubuntu@ip-172-31-34-150:~$
ubuntu@ip-172-31-34-150:~$ sudo apt update && sudo apt install python3 python3-pip python3-venv -y
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:5 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
```

Now install git for fetching and connecting to the repo:

```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-34-150:~$ sudo apt install git -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.43.0-1ubuntu7.3).
git set to manually installed.
```

Installing poppler for our ATS to read the image resume as well:

```
ubuntu@ip-172-31-34-150:~$
ubuntu@ip-172-31-34-150:~$ sudo apt install poppler-utils -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libcairo2 liblcms2-2 libopenjp2-7 libpixman-1-0 libpoppler134 libxcb-render0 libxcb-shm0 libxrender1 poppler-data
Suggested packages:
```

Cloning the repo for fetching the code of our ATS system:

```
ubuntu@ip-172-31-34-150:~$
ubuntu@ip-172-31-34-150:~$
ubuntu@ip-172-31-34-150:~$ git clone https://github.com/Anu-Anurag/Application-Tracking-System
Cloning into 'Application-Tracking-System'...
remote: Enumerating objects: 45, done.
remote: Counting objects: 100% (45/45), done.
remote: Compressing objects: 100% (35/35), done.
remote: Total 45 (delta 18), reused 7 (delta 3), pack-reused 0 (from 0)
Receiving objects: 100% (45/45), 15.14 KiB | 2.52 MiB/s, done.
Resolving deltas: 100% (18/18), done.
```

Check whether the repo is cloned successfully or not:

```
ubuntu@ip-172-31-34-150:~$
ubuntu@ip-172-31-34-150:~$
ubuntu@ip-172-31-34-150:~$ cd Application-Tracking-System/
ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ ls
README.md  app.py  index.html  packages.txt  requirements.txt
ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
```

Now setup and activate the virtual environment:

```
ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ python3 -m venv venv
ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ source venv/bin/activate
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
```

Updating the pip package manager and downloading dependencies from requirements.txt:

```
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ pip install --upgrade pip
Requirement already satisfied: pip in ./venv/lib/python3.12/site-packages (24.0)
Collecting pip
  Downloading pip-25.2-py3-none-any.whl.metadata (4.7 kB)
Downloading pip-25.2-py3-none-any.whl (1.8 MB)
   ---------------------------------------- 1.8/1.8 MB 30.8 MB/s eta 0:00:00
Installing collected packages: pip
  Attempting uninstall: pip
    Found existing installation: pip 24.0
    Uninstalling pip-24.0:
      Successfully uninstalled pip-24.0
Successfully installed pip-25.2
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ pip install -r requirements.txt
Collecting streamlit (from -r requirements.txt (line 1))
  Downloading streamlit-1.49.1-py3-none-any.whl.metadata (9.5 kB)
```

Installed Google GenAI console in venv:

```
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ pip install google-generativeai
Requirement already satisfied: google-generativeai in ./venv/lib/python3.12/site-packages (0.8.5)
Requirement already satisfied: google-ai-generativelanguage==0.6.15 in ./venv/lib/python3.12/site-packages (from google-generativeai) (0.6.15)
```

Generate an API key from Google Cloud console:

API Keys

	Name	Creation date ↓	Restrictions	Actions
☐ ⚠	API key 1	Aug 31, 2025	–	Show key ⋮

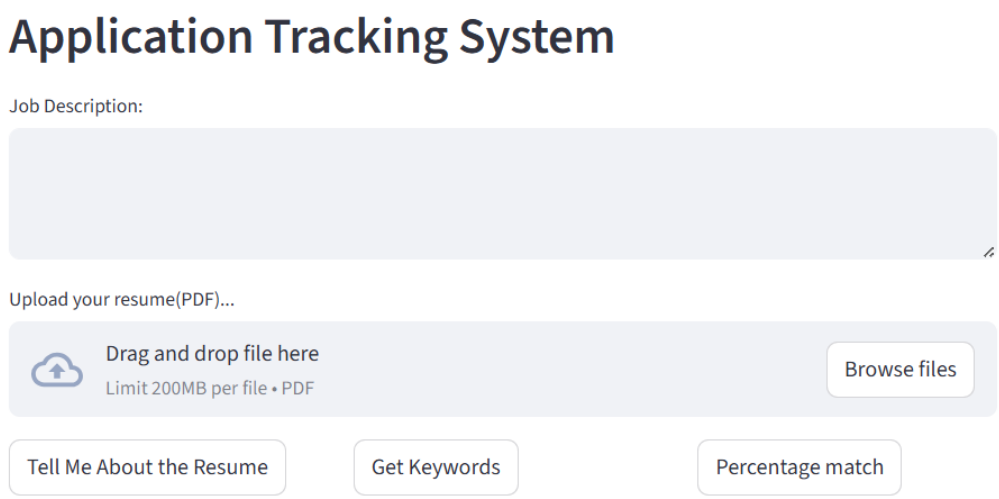
Create a directory and add the API key in a file inside that directory:

```
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ mkdir -p .streamlit
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ vi .streamlit/secrets.toml
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
```

Finally, run the Streamlit app:

```
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$
(venv) ubuntu@ip-172-31-34-150:~/Application-Tracking-System$ streamlit run app.py --server.port 8501 --server.enableCORS false
2025-09-01 08:41:03.251
Warning: the config option 'server.enableCORS=false' is not compatible with
'server.enableXsrfProtection=true'.
As a result, 'server.enableCORS' is being overridden to 'true'.

More information:
In order to protect against CSRF attacks, we send a cookie with each request.
To do so, we must specify allowable origins, which places a restriction on
cross-origin resource sharing.

If cross origin resource sharing is required, please disable server.enableXsrfProtection.


Collecting usage statistics. To deactivate, set browser.gatherUsageStats to false.


  You can now view your Streamlit app in your browser.

  Local URL: http://localhost:8501
  Network URL: http://172.31.34.150:8501
  External URL: http://13.201.35.79:8501
```

And our ATS web app is running fine:



Well Done…