

Instruction Manual

Web Scraping + Rate-Limit Demo + Cloudflare Tunnel (Windows / Linux / macOS)

This guide shows how to install the required Python packages, run the local **demo_site.py** website and expose it on a public URL using **cloudflared** so you can test scraping and proxy behavior safely.

1) Install Python packages

Open a terminal in your project folder and install these packages:

```
pip install requests
pip install beautifulsoup4
pip install fastapi
pip install uvicorn
pip install colorama
```

Tip: If pip doesn't work, try python -m pip install

If you are using **PyCharm** you can go and in interpreter settings simple click + sign and add all the necessary packages!

2) Run the local demo website (FastAPI)

Make sure **demo_site.py** is in the current folder. Then run:

```
uvicorn demo_site:app --host 127.0.0.1 --port 8000
```

Keep this terminal open. Test the site in your browser:

```
http://127.0.0.1:8000/
```

If the browser loads the page, your local server is running correctly.

3) Install Cloudflare Tunnel (**cloudflared**)

Install **cloudflared** depending on your operating system:

Windows

```
winget install Cloudflare.cloudflared
```

Linux (Debian/Ubuntu)

```
sudo apt install cloudflared
```

macOS

```
brew install cloudflared
```

After installing, close and reopen your terminal (on Windows, it may help to run as Administrator), then check:

```
cloudflared --version
```

4) Create a public URL for your local website

Open a **second** terminal (keep unicorn running in the first one) and run:

```
cloudflared tunnel --url http://127.0.0.1:8000
```

Look for the **trycloudflare.com** link in the output, then open it in your browser:

```
+-----+  
| Your quick Tunnel has been created! Visit it at (it may take some time to be reachable): |  
| https://controlling-helps-doug-donald.trycloudflare.com |  
+-----+
```

Important: Keep the **cloudflared** terminal **open**. If you close it, the public link stops working.

Quick troubleshooting

- **cloudflared not recognized:** install again or use the downloaded cloudflared.exe and run it from the same folder with ./cloudflared.exe
- **Public URL shows 502/Host error:** your local server likely stopped. Re-run unicorn and refresh the public URL.
- **Still getting 429:** rate limits are often per-IP. A single proxy is still one IP. To make a “proxy helps” demo, use rotating proxies or a proxy pool with different IPs.