



## Christmas Rush: Build a Mini Fail2Ban Module

### Scenario:

It's a cold December day, just three days before Christmas. Your boss, **Michelle Scott**, has handed you a last-minute task critical to the security of your company's online platform. With heightened traffic and the holidays fast approaching, malicious activity is on the rise.

Your teammate **Geno Linetti** is building the logic that will respond to detected threats. **You are responsible for building a detection module** that scans application logs, identifies suspicious IPs, and blocks them.

To help out, your colleague **Jill** has recommended using the [IPLocate API](#) to enrich your IP detection logic—especially to flag known **Tor exit nodes** or **traffic from China**, which should be blocked automatically.

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### Your Task

Create a **Python script** that mimics [Fail2Ban](#)-style behavior:

- Accepts one or more application log files via command-line arguments
  - Detects abusive or high-risk IPs
  - Simulates blocking those IPs with printed output
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### Technical Requirements

Your script must:

1. **Accept log files** as command-line arguments:

Shell

```
python block_ips.py app1.log app2.log
```

- 2.

**Parse each line** to extract:

- IP address

3. Example line:

None

```
2025-12-22 15:12:07 [WARN] Failed login from 192.168.1.10
```

4.

**Blocking Logic:**

Your script must block IPs under the following conditions:

**Always block if:**

- The IP is identified as coming from **Tor**
- The IP is located in **China, Russia, or North Korea**

5. **Simulate blocking** by printing:

None

```
[BLOCKED] IP 192.168.1.10 has been blocked due to suspicious activity.
```

6.

Ensure **no duplicate blocks** are reported for the same IP.

 **Sample Usage**

Shell

```
python block_ips.py logs/app.log
```

Example Output:

None

[BLOCKED] IP 203.0.113.42 (China, Tor Exit Node) has been blocked.  
[BLOCKED] IP 198.51.100.17 has been blocked due to suspicious activity.

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## **Deliverables**

- A single `block_ips.py` script
- Inline comments explaining your logic