

# AI-Powered Web Vulnerability Scanner: Build It From Scratch

A Complete Guide to Building an Automated Web Security Scanner with Hurl, SSLyze, and AI

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## What You Get in the Full Book

- **70+ pages** of hands-on content
  - **16 chapters** covering every module from scratch
  - Complete source code with detailed explanations
  - 9 Hurl security test files explained
  - TLS/SSL scanner implementation
  - AI-powered remediation system
  - Docker deployment and CI/CD
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## What This Project Does

Provide a website URL, and it automatically checks:

1. Security headers (X-Frame-Options, CSP, HSTS, etc.)
2. Cookie security (Secure, HttpOnly, SameSite)
3. CORS policy (rejects malicious origins)
4. TLS/SSL versions (SSL 2.0/3.0 disabled, TLS 1.2/1.3 enabled)
5. HTTP-to-HTTPS redirects
6. CSRF token presence
7. AI generates specific remediation for each failure
8. AI provides overall security posture grade (A-F)

## One Command

```
web-vuln-scanner --domains example.com --reports-dir ./reports \
  --ai-analyze --ai-remediate --ai-provider ollama --html-report
```

## Technology Stack

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Technology	Role
Python 3.10+	Core language

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<b>Technology</b>	<b>Role</b>
Hurl 6.1	Declarative HTTP security testing
SSLyze	TLS protocol analysis
Ollama / OpenAI / Bedrock	AI remediation + posture analysis
Docker	Container deployment

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## Chapter Overview

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<b>Chapters</b>	<b>Topic</b>
1-3	Web security fundamentals, architecture, setup
4-5	Hurl preprocessor and all 9 security test files
6-7	Output parser and TLS scanner
8-9	AI analyzer and HTML reporter
10-12	CLI, running scans, understanding reports
13-16	Docker, testing, extending, conclusion

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**Get the full book:** All source code, explanations, and step-by-step instructions.

Source: <https://github.com/aisecuritytools-ai/ai-powered-web-vulnerability-scanner>

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