Bug Mining The Canadian Government’s Websites: Security Findings

This sheet shows how many URLs were crawled per page, the types of issues encountered, and how many security practices were not followed.

Burnaby

Info: <https://www.burnaby.ca/>

495/500 Crawled

Issue Types: 3

Warnings: 20

Improvements: 22

Security:

9 Unsafe Cross-Link Origin Links

1 Missing HSTS Header

393 Missing Content-Security Policy Header

192 Missing X-Frame-Options Header

393 Missing Secure-Referrer-Policy Header

Jobs: <https://tre.tbe.taleo.net/tre01/ats/careers/v2/jobSearch?org=CITYBURNABY&cws=37>

28/28 Crawled

Issue Types: 8

Warnings: 8

Security:

3 Unsafe Cross-Link Origin Links

3 Missing Content-Security Policy Header

3 Missing X-Frame-Options Header

3 Missing Secure-Referrer-Policy Header

Open Data: <https://data.burnaby.ca/>

7/7 Crawled

Issue Types:1

Warnings: 5

Opportunities: 4

Security:

1 Missing X-Frame-Options Header

1 Missing Secure-Referrer-Policy Header

Services: <https://www.bbyservices.ca/>

457/459 Crawled

Issue Types: 5

Warnings: 16

Opportunities: 11

Security:

2 HTTP URLs

100 Protocol-Relative Resource Links

100 Unsafe Cross-Link Origin Links

342 Missing Content-Security Policy Header

342 Missing X-Frame-Options Header

342 Missing X-Content-Type-Options Header

342 Missing Secure-Referrer-Policy Header

Tax/Revenue: <https://pts.burnaby.ca/tempestprd/LoginManager/>

26/26 Crawled

Issue Types: 3

Warnings: 10

Opportunities: 6

Security:

3 Unsafe Cross-Link Origin Links

16 Missing Content-Security Policy Header

16 Missing Secure-Referrer-Policy Header

British Columbia

Issue Types:

Warnings:

Opportunities:

Info: <https://www2.gov.bc.ca/gov/content/home>

Error - Try Again Another Time

Jobs: <https://www.workbc.ca/search-and-prepare-job/find-jobs#/job-search>

481/500 Crawled

Issue Types: 5

Warnings: 23

Opportunities: 20

Security:

154 Protocol-Relative Resource Links

154 Unsafe Cross-Link Origin Links

379 Missing HSTS Header

379 Missing Content-Security Policy Header

221 Missing X-Frame-Options Header

221 Missing X-Content-Type-Options Header

379 Missing Secure-Referrer-Policy Header

Open Data: <https://catalogue.data.gov.bc.ca/>

245/245 Crawled

Issue Types: 1

Warnings: 8

Opportunities: 4

Security:

245 Missing HSTS Header

245 Missing Content-Security Policy Header

245 Missing X-Frame-Options Header

245 Missing X-Content-Type-Options Header

245 Missing Secure-Referrer-Policy Header

Services: <https://id.gov.bc.ca/account/>

149/150 Crawled

Issue Types: 3

Warnings: 11

Opportunities: 17

Security:

1 Unsafe Cross Link Origins

122 Missing Content-Security Policy Header

115 Missing X-Content-Type-Options Header

122 Missing Secure-Referrer-Policy Header

Parks: <https://www.bcparks.ca>

500/500

Issues: 5

Warnings: 22

Opportunities: 20

20 Unsafe Cross-Origins Link

1 Protocol-Relative Resource Links

153 Missing HSTS Header

153 Missing Content-Security Policy Header

153 Missing X-Frame-Options Header

153 Missing Secure-Referrer-Policy Header

Canada

Info: <https://www.canada.ca/en.html>

490/500 Crawled

Issue Types: 4

Warnings: 18

Opportunities: 21

Security:

9 Unsafe Cross-Origins Link

191 Protocol-Relative Resource Links

213 Missing Content-Security Policy Header

1 Missing X-Frame-Options Header

213 Missing Secure-Referrer-Policy Header

Jobs: <https://www.jobbank.gc.ca/findajob>

500/500

Issue Types: 3

Warnings: 21

Opportunities: 24

Security:

44 Unsafe Cross-Origins Link

244 Protocol-Relative Resource Links

365 Missing Content-Security Policy Header

365 Missing X-Frame-Options Header

365 Missing X-Content-Type-Options Header

365 Missing Secure-Referrer-Policy Header

Open Data: <https://search.open.canada.ca/data/>

336/336

Issue Types: 3

Warnings: 9

Opportunities: 10

Security:

4 Missing X-Content-Type-Options Header

17 Missing Secure-Referrer-Policy Header

Services: <https://www.canada.ca/en/employment-social-development/services/my-account.html>

237 Crawled

Issue Types: 5

Warnings: 21

Opportunities: 21

Security:

9 Unsafe Cross-Origins Link

237 Protocol-Relative Resource Links

0 Missing HSTS Header

260 Missing Content-Security Policy Header

1 Missing X-Frame-Options Header

0 Missing X-Content-Type-Options Header

260 Missing Secure-Referrer-Policy Header

Procurement: <https://canadabuys.canada.ca/en>

436/500

Issue Types: 5

Warnings: 16

Opportunities: 23

Security:

3 Unsafe Cross-Origins Link

222 Missing Secure-Referrer-Policy Header

**5. Expand Literature/Related Works**

I previously only had 3 sources of related works, and they were all to do with the government side of things. I have since incorporated 4 more related works into my project, three of which are for assisting in the systematic classification of bugs. One weakly correlated related work was also removed from my Literature.