



March 1, 2017





- Websites need to be machine-friendly
- Add meta elements and markup to your page templates
- Test your site's SEO, and iterate



webmasters.googleblog.com
developers.google.com/search/docs/guides/

moz.com/blog searchenginejournal.com searchengineland.com searchenginewatch.com yoast.com



### ON-THE-PAGE FACTORS These elements are in the direct control of the publisher Are pages well written & have QUALITY substantial quality content? Have you researched the keywords RESEARCH people may use to find your content? Do pages use words & phrases you hope they'll be found for? Cf FRESH Are pages fresh & about "hot" topics? Do you have image, local, news, **VERTICAL** video or other vertical content? Is your content turned into direct **ANSWERS** answers within search results? Is content "thin" or "shallow" & tacking substance? Can search engines easily CRAWL "crawl" pages on site? Does site manage duplicate con-DUPLICATE tent issues well? Does your site work well for mobile Am devices & make use of app indexing? As Does site load quickly? Do URLs contain meaningful URLS keywords to page topics? Does site use HTTPS to provide HTTPS secure connection for visitors? Do you show search engines different pages than humans? Do HTML title tags contain key TITLES words relevant to page topics? Do meta description tags DESCRIPTION describe what pages are about? Do pages use structured STRUCTURE data to enhance listings? Do headlines & subheads use header HEADERS tags with relevant keywords? Do you excessively use words you STUFFING want pages to be found for? Do colors or design "hide" words Vh you want pages to be found for?

## THE PERIODIC TABLE OF SEO SUCCESS FACTORS Search engine optimization - SEO - seems like alchemy to the uninitiated. But there's a science to it. Below are some important "ranking factors" and best practices that can lead to success with both search engines and searchers. DN-THE-PACE CEO OFF-THE-PAGE SEO ARCHITECTURE HTML TRUST PERSONAL SOCIAL LINKS Ac Sr Ta Crowl Ss Te Hs As Ps ы ٧s Ca Ah Va **FACTORS WORK TOGETHER** All factors on the table are Vc important, but those marked 3 carry more weight than 1 or 2. No single factor guarantees top rankings or success, but having several favorable ones increases the odds. Negative "violation" factors shown in red harm your chances.





Commercial services crawl to populate their indexes

They display results based on their crawling

Bad or incomplete crawling can be influenced by...



# A text file read by search engine spiders

 Placed on the root of your domain: https://www.agency.gov/robots.txt

 Tells the spiders where they can and can't go on your site

 Also should tell spiders where to find the official list of your site's URLs (aka your sitemap)





```
User-Agent: *
Disallow: /tagged/
Disallow: /post/
Sitemap: https://search.digitalgov.gov/sitemap.xml
```

 Also placed on the root of your domain: https://www.agency.gov/sitemap.xml

Tells crawlers about your site, its content and its organization

Maximum file size: 50 MB







This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
▼<urlset xmlns="http://www.sitemaps.org/schemas/sitemap/0.9">
 ▼<url>
    <loc>https://search.digitalgov.gov/</loc>
    <changefreq>daily</changefreq>
    <priority>1</priority>
   </url>
 ▼<url>
    <loc>https://search.digitalgov.gov/manual/training.html</loc>
    <lastmod>2017-02-23</lastmod>
    <changefreq>monthly</changefreq>
   </url>
    <loc>https://search.digitalgov.gov/manual/rss.html</loc>
    <lastmod>2017-02-22</lastmod>
    <changefreq>monthly</changefreq>
   </ur>
 ▼<url>
   ▼<loc>
      https://search.digitalgov.gov/releases/november-2016.html
    </loc>
    <lastmod>2017-02-22</lastmod>
    <changefreq>monthly</changefreq>
   </url>
```

 "The Fetch as Google tool enables you to test how Google crawls or renders a URL on your site.

 You can use Fetch as Google to see whether Googlebot can access a page on your site, how it renders the page, and whether any page resources (such as images or scripts) are blocked to Googlebot."



• Same concept as Google's:)



search.digitalgov.gov	
etch as Bingbot <sup>(Beta)</sup> •	
Submit a URL to see how the page's code appears to Bing.  Enter a URL FETCH	
REFETCH DELETE EXPORT	
URL	Status
https://search.digitalgov.gov/manual/collections.html c	Completed
http://search.digitalgov.gov/ c3	Completed
URL: https://search.digitalgov.gov/manual/collections.html Status: Completed	
HTTP11 200 OK Cache-Control: max ages400 Connection: keep alive Date: Wed, of Max 2017 1357-29 GMT Via: 1.1 variabt Via: 1.1 variab digitalgov gov Content-Length: 4150 Content-Rength: 4150 Content-Rength: 4150 Content-Recoding zip Expires: Wed, of IM 2017 1450-643 GMT Last Modified: Mon; 27 Feb 2017 19:27:18 GMT Accept-Engosity Age: 0 Severe: Githlib com Vary: Accept-Engosity Severe: Githlib com Vary: Accept-Engosity Severe: Githlib com Severe: Githlib com Vary: Accept-Engosity Severe: G	
<pre>cIDOCTYFE Immb dmml large* en'&gt; dmat large* en's en's en's en's en's en's en's en's</pre>	
dlink href="Jassets/css/bootstrap-responsive.css" rel="stylesheet" -> dlink href="Jassets/css/bootstrap-responsive.css" rel="stylesheet">-> dlink href="Jassets/css/boots-responsive.css" rel="stylesheet">-> dlink href="Jassets/css/boots-responsive.css" rel="stylesheet">-> dlink href="Jassets/css/boots-responsive.css" rel="stylesheet">-> dlink href="styleshee	
el.— HTMLS shim, for IE-6-8 support of HTML5 elements -> d restauro.	

"Does your site manage duplicate content issues well?"



- If a single link is being served multiple ways, search engines have to "guess" which version is the right one.
- Multiple URLs for same content, depending on folder
  - http://agency.gov/similar-content
  - http://www.agency.gov/similar-content  $\circ$
  - https://agency.gov/similar-content 0
  - https://www.agency.gov/similar-content
  - https://agency.gov/content/similar-content
  - https://content.agency.gov/similar-content 0



 Google's rel=canonical on their page about rel=canonicals





Use 301 redirects when permanently moving content

 The redirect will tell search engines that a page has permanently moved to a new location



 I.e., make sure all your page links are <a href="https://agency.gov/page/">https://agency.gov/page/</a> or <a href="https://agency.gov/page/">www.agency.gov/page/</a> or /page/



- For Google, set your preferred domain (www or non-www)
  - Search Console -> Choose the site you want to set it for -> Gear Icon -> Site Settings -> Preferred Domain section

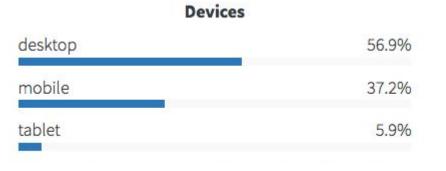
 Can use 301s to redirect traffic from your non-preferred domain

"Does your site work well for mobile devices?"



 In spring 2016, Google increased the impact of mobile-friendliness as a ranking signal

Also:

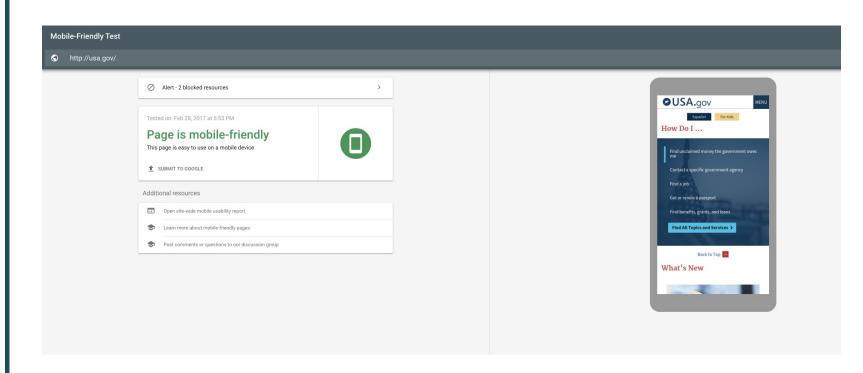


Federal

websites!





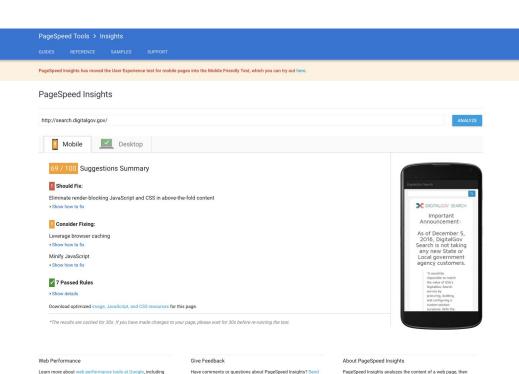


"Does your site load quickly?"



 Impact on relevancy ranking not as great as other factors (Google noted this back in 2010) but it is critical to overall UX





feedback or discuss on our mailing list.

generates suggestions to make that page faster. Learn more.

browser extensions and APIs for Insights, PageSpeed Service,

and our optimization libraries.

"Do URLs contain meaningful keywords to page topics?"





Use punctuation

"The URL

is much more useful to us than

We recommend that you use hyphens (-) instead of underscores
 (\_)"



"Does your site use HTTPS to provide a secure connection for visitors?"



 Since 2014, Google has been advocating "HTTPS Everywhere"

It is a lightweight ranking signal

Also, we make it easy with DigitalGov Search!





Show <b>10</b>   <u>25</u>   <u>50</u>   <u>100</u> entries	Download CSV	Search:	digitalgov.gov		
▲ Domain		Enforces HTTPS	Strict Transport Security (HSTS)	Preloaded (recommended)	SSL Labs Grade
digitalgov.gov	Yes	Yes	Yes		<u>A+</u>
HTTPS enforced. Cor	nsider preloading this doma	in to enforce HTTPS acro	oss the entire zone.		
Known public subdo	mains:				
100% of 5 public	sites known to Censys enfo	rce HTTPS.			
100% of 4 public	sites known to the Digital A	nalytics Program enforce	HTTPS.		
For more details,	read our methodology, or d	ownload subdomain data	for this agency.		

<< 1 >>

Showing 1 to 1 of 1 entries (filtered from 1,118 total entries)

"Do HTML title tags contain keywords relevant to page topics?"



# <title> Key Attributes of Excellent Titles</title>

## to the page

- Only include site or agency name following a pipe
- Descriptive and (<70 characters)</li>

Relevant to queries



"Do meta descriptions describe what pages are about?"



<meta name="Description"
content:"Description text goes here.">

Unique to page

~155 characters including spaces

Keywords at beginning

"Do headlines & subheads use header tags with keywords?"



# • Use <h#> tags!

- Page title should be in the <h1>
- Tags needs to be in order
  - o <h1>
  - o <h2>
  - o <h3>
  - o etc.



#### <meta>

#### Positive commands:

```
<title>
<meta name="description" content="blah blah">
<meta name="google-site-verification" content="..." />
<meta http-equiv="Content-Type" content="...; charset=..." />
<meta charset="..." >
```

#### Negative commands:

```
<meta name="robots" content="various_commands_see_help_page">
<meta name="googlebot" content="various_commands_see_help_page">
<meta name="google" content="nositelinkssearchbox" />
<meta name="google" content="notranslate" />
```



"Do pages use structured data to enhance listings?"



Informs rich snippets and "cards" in search results

- Allows computers to interpret what the text means
  - "Semantic markup"



**Entities & Attributes** 

Nouns & Adjectives

What is it, and what's it like?





# Schema.org

• itemprop

# **Open Graph Protocol**

• og:

#### **Dublin Core**

• dc:



...and more!

```
Secure view-source:https://www.commerce.gov/page/api-documentation-commercegov
 1 < IDOCTYPE html>
 2 <html lang="en" dir="ltr">
 3 <head>
    <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1">
 5 <meta charset="utf-8" />
 6 k rel="shortcut icon" href="https://www.commerce.gov/sites/all/themes/doc/doc theme/favicon.ico" type="image/vnd.microsoft.icon" />
    <meta name="viewport" content="initial-scale=1" />
 8 <meta name="viewport" content="width=device-width, initial-scale=1.0, user-scalable=yes" />
    <meta name="MobileOptimized" content="width" />
10 <meta name="description" content="We invite you to use our content API to enhance the value, accessibility and usability of Commerce data for gove:
    and the public." />
11 <meta name="HandheldFriendly" content="true" />
12 <meta name="apple-mobile-web-app-capable" content="yes" />
13 <meta name="keywords" content="Data, Application Programming Interfaces (APIs)" />
14 <meta name="generator" content="Drupal 7 (http://drupal.org)" />
15 15 16 rel="image src" href="https://www.commerce.gov/sites/commerce.gov/files/open for biz-agenda logo final.jpg" />
16 16 16 rel="canonical" href="https://www.commerce.gov/page/api-documentation-commercegov" />
17 18 rel="shortlink" href="https://www.commerce.gov/node/1489" />
18 <meta property="og:site name" content="Department of Commerce" />
19 <meta property="og:type" content="website" />
20 <meta property="og:url" content="https://www.commerce.gov/page/api-documentation-commercegov" />
21 <meta property="og:title" content="API do umentation for Commerce.gov" />
22 <meta property="og:description" content="Ve invite you to use our content API to enhance the value, accessibility and usability of Commerce data for a property="og:description" content="Ve invite you to use our content API to enhance the value, accessibility and usability of Commerce data for a property="og:description" content="Ve invite you to use our content API to enhance the value, accessibility and usability of Commerce data for a property="og:description" content="Ve invite you to use our content API to enhance the value, accessibility and usability of Commerce data for a property="og:description" content="Ve invite you to use our content API to enhance the value, accessibility and usability of Commerce data for a property="og:description" content API to enhance the value, accessibility and usability of Commerce data for a property="og:description" content approximate the content approximate 
    business and the public." />
23 <meta property="og:updated time" content='2016-09-23T13:36:33-04:00" />
24 <meta name="twitter:card" content="summary large image" />
25 <meta name="twitter:site" content="@CommerceGov" />
26 <meta name="twitter:url" content="https://www.commerce.gov/page/api-documentation-commercegov" />
27 <meta name="twitter:description" content= We invite you to use our content API to enhance the value, accessibility and usability of Commerce data:</pre>
    business and the public." />
28 <meta name="twitter:title" content="API documentation for Commerce.gov" />
29 <meta property="article:published time" content="2015-08-25T17:06:50-04:00" />
30 <meta property="article:modified time" content="2016-09-23T13:36:33-04:00" />
31 <meta itemprop="name" content="API documentation for Commerce.gov" />
32 <meta itemprop="description" content="We Invite you to use our content API to enhance the value, accessibility and usability of Commerce data for <
    business and the public." />
33 <title>API documentation for Commerce.gov | Department of Commerce</title>
34 <link type="text/css" rel="stylesheet" href="https://www.commerce.gov/sites/commerce.gov/files/css/css xE-rWrJf-fncB6ztZfd2huxggxu4W0-gwma6Xer30m4
35 <link type="text/css" rel="stylesheet" href="https://www.commerce.gov/sites/commerce.gov/files/css/css ujN36yHagKHTKyxjs cj3 DuSqYFJTOaKF2F28xMKws
```

% <link type="text/css" rel="stylesheet" href="https://www.commerce.gov/sites/commerce.gov/files/css/css KmCK7kK9g3XAfDWNd1V261sD5ZgVeOF2Fhfvs8v197k</pre>

# Subtypes:

- articles
  - o news
  - reports
- blog posts
- datasets
- maps
- webpages
- entire websites



Recommended entity type: CreativeWork

### Other useful entity types

- Organization
  - GovernmentOrganization
  - NOTE! Google's org cards are managed through Google My Business
- ContactPoint
  - PostalAddress



### **JSON-LD**

<script> in the <head>

#### **RDFa**

inline properties in the <body>

#### Microdata

inline properties in the <body>



```
kscript type="application/ld+json">
      "@context": "http://schema.org",
      "@type": "BreadcrumbList",
      "itemListElement": [{
        "@type": "ListItem",
        "position": 1,
        "item": {
          "@id": "https://example.com/books",
          "name": "Books",
          "image": "http://example.com/images/icon-book.png"
12
13
      },{
14
        "@type": "ListItem",
15
        "position": 2,
16
        "item": {
          "@id": "https://example.com/books/authors",
18
          "name": "Authors",
19
          "image": "http://example.com/images/icon-author.png"
20
21
      },{
        "@type": "ListItem",
        "position": 3,
24
        "item": {
25
          "@id": "https://example.com/books/authors/annleckie",
          "name": "Ann Leckie",
27
          "image": "http://example.com/images/author-leckie-ann.png"
28
29
      },{
30
        "@type": "ListItem",
31
        "position": 4,
32
        "item": {
33
          "@id": "https://example.com/books/authors/ancillaryjustice",
34
          "name": "Ancillary Justice",
35
          "image": "http://example.com/images/cover-ancillary-justice.png"
36
37
      }]
38
39 </script>
```



```
property="itemListElement" typeof="ListItem">
       <a property="item" typeof="WebPage"
           href="https://example.com/books">
         <span property="name">Books</span>
         <img property="image" src="http://example.com/images/icon-</pre>
    bookicon-.png" alt="Books"/></a>
       <meta property="position" content="1">
     9
10
      property="itemListElement" typeof="ListItem">
11
       <a property="item" typeof="WebPage"
12
           href="https://example.com/books/sciencefiction">
13
         <span property="name">Science Fiction</span>
         <img property="image" src="http://example.com/images/icon-science-</pre>
    fiction.png" alt="Genre: Science Fiction"/></a>
       <meta property="position" content="2">
     16
17
18
     property="itemListElement" typeof="ListItem">
19
       <a property="item" typeof="WebPage"
20
           href="https://example.com/books/sciencefiction/awardwinnders">
21
         <span property="name">Award Winners</span>
         <img property="image" src="http://example.com/images/cover-ancillary-</pre>
    justice.png" alt="Ancillary Justice"/></a>
23
       <meta property="position" content="3">
24
     25
```



```
itemprop="itemListElement" itemscope
          itemtype="http://schema.org/ListItem">
        <a itemscope itemtype="http://schema.org/Thing"
          itemprop="item" href="https://example.com/books">
           <span itemprop="name">Books</span>
           <img itemprop="image" src="http://example.com/images/icon-</pre>
    bookicon.png" alt="Books"/></a>
        <meta itemprop="position" content="1" />
 9
      10
11
      itemprop="itemListElement" itemscope
12
          itemtype="http://schema.org/ListItem">
13
        <a itemscope itemtype="http://schema.org/Thing"
14
          itemprop="item" href="https://example.com/books/sciencefiction">
15
          <span itemprop="name">Science Fiction</span>
          <img itemprop="image" src="http://example.com/images/icon-science-</pre>
    fiction.png" alt="Genre: Science Fiction"/></a>
       <meta itemprop="position" content="2" />
17
18
      19
20
      itemprop="itemListElement" itemscope
21
          itemtype="http://schema.org/ListItem">
       <a itemscope itemtype="http://schema.org/Thing"
          itemprop="item"
   href="https://example.com/books/sciencefiction/ancillaryjustice">
          <span itemprop="name">Ancillary Justice</span>
24
25
          <img itemprop="image" src="http://example.com/images/cover-ancillary-</pre>
    justice.png" alt="Ancillary Justice"/></a>
26
       <meta itemprop="position" content="3" />
27
      28
   </01>
20
```

# Essential schema.org properties

**Author** 

dateModified

datePublished

Headline

Name

Url

Description

Breadcrumb (WebPage)

http://www.w3resource.com/schema.org/introduction.php



#### Control your site name

```
<head itemscope itemtype="http://schema.org/WebSite">
<title itemprop='name'>Your WebSite Name</title>
<link rel="canonical" href="https://example.com/" itemprop="url">
```

#### Enable site search within Google results

```
<div itemscope itemtype="http://schema.org/WebSite">
  <meta itemprop="url" content="https://www.example.com/"/>
  <form itemprop="potentialAction" itemscope</pre>
itemtype="http://schema.org/SearchAction">
    <meta itemprop="target" content="https://guery.example.com/search?g=</pre>
{search term string}"/>
    <input itemprop="query-input" type="text" name="search term string"</pre>
required/>
    <input type="submit"/>
  </form>
</div>
```

# Stuffing

- Meta keywords
- Meta description

#### Hidden

Text on page

# Cloaking

Showing different pages to engines than to humans



- Websites need to be machine-friendly
- Add meta elements and markup to your page templates
- Test your site's SEO, and iterate



- DigitalGov Search Basics:
  - Thursday, March 30, 2017, 2:00 PM 3:00 PM EST
  - Held Bimonthly

- April Indexing your content directly with DigitalGov Search
- June Data driven search design
- October TBD

Video recordings available on our website



search@support.digitalgov.gov | 202-505-5315

https://search.digitalgov.gov

# Thank you!

