

Google vs. Microsoft Bing Search APIs: A Detailed Comparison

This is part two of a two-part article covering the current state of Web search APIs. [Please be sure to check out part one.](#)

The first part of this article covered the state of Web search APIs and how there are not a lot of options for developers when it comes to Web search APIs. The *ProgrammableWeb* directory lists over 800 APIs in the [Search category](#), but few of these are feature-packed web search APIs like those offered by Google and Microsoft. Part two of this article takes a detailed look at the Web search tools and APIs provided by Google and Microsoft for developers.

This is not a comprehensive comparison of Google and Microsoft Bing search tools and APIs. What this article does compare are some of the Web search features Google and Microsoft have made available via APIs.

Article Sections

There are three main sections to this article. Readers can page down to the specific sections they are interested in:

- Overview of Google Search Tools/APIs
- Overview of Microsoft Bing Search APIs
- Google vs. Microsoft Bing Search APIs – Feature Comparison Charts

Overview of Google Search Tools/APIs

Google provides several Web search APIs that are available via Google Custom Search Engine (CSE) and Google Site Search. Google also recently released the [Google Knowledge Graph Search API](#).

Google Custom Search Engine (CSE)

About 32,800 results (0.35 seconds)

Sort by: Relevance

powered by Google™ Custom Search

[Top 10 Machine Learning APIs: AT&T Speech, IBM Watson, Google ...](#)

[www.programmableweb.com/news/top...machine-learning.../03](#)

Aug 3, 2015 ... **Machine learning** is everywhere these days including your smartphone, your email, your Amazon.com account and even your connected car.

[Machine Learning APIs and Mashups | ProgrammableWeb](#)

[www.programmableweb.com/category/machine-learning](#)

Machine Learning APIs and Mashups as well as related news, source code, how- to's, frameworks, libraries, SDKs & developer information.

[How Predictive APIs Simplify Machine Learning | ProgrammableWeb](#)

[www.programmableweb.com/news/how...machine-learning.../22](#)

Jul 22, 2015 ... Predictive APIs give devs the tools to add **Machine Learning** capabilities to their apps. Not all predictive APIs are built the same and this article ...

[Amazon Machine Learning API | ProgrammableWeb](#)

[www.programmableweb.com/api/amazon-machine-learning](#)

The Amazon **Machine Learning** REST API allows developers to build applications based on Amazon **Machine Learning** models that find patterns in data.



[Machine Learning as a Service: Swift IQ Predicts the Future ...](#)

[www.programmableweb.com/news/machine-learning...swift.../01](#)

Nov 1, 2013 ... Swift IQ believes **Machine Learning** as a Service (MLaaS) will become a key market in the near future as more providers look to integrate ...

[MonkeyLearn Launches Machine Learning Platform API ...](#)

[www.programmableweb.com/news/...machine-learning...api.../29](#)

Sep 29, 2014 ... MonkeyLearn offers a new API platform allowing developers to easily add text mining **machine learning** technologies to any app or product.

[77 Machine Learning APIs | ProgrammableWeb](#)

[www.programmableweb.com/category/machine-learning/api](#)

Flyr predicts air travel prices using **machine learning** technology. ... The IBM Watson Retrieve and Rank API uses **machine learning** to enhance information ...

About 11,300 results (0.37 seconds)

powered by Google™ Custom Search



Screenshot showing Google CSE search results for programmableweb.com.

[Google Custom Search Engine \(CSE\)](#) can be used by developers to add Web search and/or site search capabilities to a website, blog, or collection of websites that they can control via Google

Search Console/Webmaster Tools. Google CSE can also be used to create a custom search engine that focuses on a specific topic returning search results from multiple URLs. [Google CSE](#) features a RESTful API that returns search results data in JSON or Atom format.

Google Custom Search Engine is free for up to 100 search queries per day. Additional queries can be purchased (\$5 per 1,000 queries) and the maximum number of queries allowed per day is 10,000.

Google Site Search

The screenshot displays the Google Site Search interface. At the top, the logo reads "Google Search for Work" with a search input field containing "Search this site" and a magnifying glass icon. Below the logo is a navigation menu with links for Home, Solutions, **Products**, Customers, Partners, and Support. The main heading says "Try search on your website now". The search input field contains the URL "http://www.programmableweb.com" and the search term "machine learning". A blue "Search" button is positioned below the input fields. The search results are listed below, each with a blue title, a green URL, and a snippet of text:

- Top 10 Machine Learning APIs: AT&T Speech, IBM Watson, Google ...**
www.programmableweb.com/news/top...machine-learning.../03
Aug 3, 2015 ... Machine learning is everywhere these days including your smartphone, your email, your Amazon.com account and even your connected car.
- How Predictive APIs Simplify Machine Learning | ProgrammableWeb**
www.programmableweb.com/news/how...machine-learning/.../22
Jul 22, 2015 ... Predictive APIs give devs the tools to add Machine Learning capabilities to their apps. Not all predictive APIs are built the same and this article ...
- Machine Learning as a Service: Swift IQ Predicts the Future ...**
www.programmableweb.com/news/machine-learning...swift.../01
Nov 1, 2013 ... Swift IQ believes Machine Learning as a Service (MLaaS) will become a key market in the near future as more providers look to integrate ...
- MonkeyLearn Launches Machine Learning Platform API ...**
www.programmableweb.com/news/...machine-learning...api/.../29
Sep 29, 2014 ... MonkeyLearn offers a new API platform allowing developers to easily add text mining machine learning technologies to any app or product.

Screenshot showing search results returned for ProgrammableWeb.com using Google Site Search [demo](#).

[Google Site Search](#) is part of the Google for Work suite of cloud-based productivity, organization, and collaboration tools. Google Site Search can be used by developers to add a custom site search box that leverages many of the features of the Google search engine

platform. Developers can customize the look and feel of the search results and create custom Rich Snippets to showcase specific details such as image thumbnails, ratings, document types, authors, multimedia access, and add-to-cart buttons. Other Google Site Search features include date biasing, label refinements, synonyms, promotions in autocomplete, and more. Google Site Search features two APIs; one that returns search results data in JSON or Atom and the other returning search results data in XML.

Google Site Search is the paid version of Google CSE and the lowest priced paid plan at this time is \$100/yr for 20,000 search queries/year.

Google Knowledge Graph Search API

Google released the [Google Knowledge Graph Search API](#) (read-only) at the end of last year and the API can be used to search for entities (people, places, and things) in the Google Knowledge Graph. The types of entities that can be retrieved include (but not limited to) book, movie, music group, organization, person, place, TV series, and website.

The Google Knowledge Graph Search API is free to use (there are no paid plans at this time) and the maximum number of API calls per day (per project) is 100,000.

Overview of Microsoft Bing Search APIs

Microsoft recently released updated versions of Bing Search APIs (v5) that include [new features and improvements](#). Microsoft has also released new individual Bing Search APIs (image search, video search, news search, and autocomplete) that include additional features not available in the Bing Web Search API. Bing Search APIs are RESTful and responses are returned in JSON.

The free plan allows up to 1,000 transactions/month across all Bing Search APIs. The company plans on making paid plans available this summer.

Bing Web Search API

Bing Search API Comparison Tool (v5 vs v2) vampire diaries web images videos news


New APIs

Web Images Videos News

7,960,000 RESULTS


News about vampire diaries

bing.com/news




'The Vampire Diaries' - Is Elena Inside The Vault? — Watch Finale Promo
Hollywood Life (blog) · 6 hours ago

Wait a minute, who is that? In the trailer for 'The Vampire Diaries' season seven finale, Damon utters a name that gives us a little ping of hope/wondering/confusion for the return of Elena Gilbert. Could that be? Could Elena Gilbert really be the ...



THE VAMPIRE DIARIES season finale, Friday 5/13 at 8pm on WGNT
News Channel3 · 5 hours ago

'Gods & Monsters' — (8:00-9:00 p.m. ET) (Content Rating TBD) (HDTV) **THE ULTIMATE SACRIFICE** — Despite their best efforts to help Bonnie (Kat Graham) through the harrowing predicament she now faces, Damon (Ian Somerhalder), Enzo (Michael Malarkay) ...



The Vampire Diaries Season 7 Finale Spoilers 'Gods & Monsters': Damon Dies — Will Ian Somerhalder Return On TVD Season 8?
Celeb Dirty Laundry Entertainment News · 1 day ago

The Vampire Diaries Season 7 finale spoilers for Episode 22, 'Gods & Monsters' promises to have all fans of The CW show on the edge of their seats and waiting impatiently for TVD Season 8! Time is running out to undo Bonnie Bennett (Kat Graham) as a ...

The CW - Official Site
www.cwtv.com
Official site of The CW Television Network, featuring The Flash, Jane The Virgin, iZombie, Arrow, The Vampire Diaries, Supernatural, The Originals, Crazy Ex ...

Shows

Arrow

Supernatural





See results only from cwtv.com

The Flash

The Vampire Diaries

Reign

Videos of vampire diaries
bing.com/videos

 42:30 The Vampire Diaries: Postcards Hulu	 41:42 The Vampire Diaries - Days of The CW Network	 42:28 THE VAMPIRE DIARIES Season Watch-TVSeries...	 42:28 The Vampire Diaries: One Way Hulu
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See more videos of vampire diaries

The Vampire Diaries | The Official Site
vampirediaries.com
Here's What Your Zodiac Sign Reveals About Your Personality 12 Foolproof Ways To Kill A Vampire (According To Hollywood)

Watch The Vampire Diaries Online - at Hulu
www.hulu.com/the-vampire-diaries
Watch The Vampire Diaries online. Stream episodes and clips of The Vampire Diaries instantly.

The Vampire Diaries TV Show: News, Videos, Full Episodes ...
www.tvguide.com/tvshows/vampire-diaries/297527
Watch full episodes of The Vampire Diaries and get the latest breaking news, exclusive videos and pictures, episode recaps and much more at TVGuide.com

Amazon.com: vampire diaries
www.amazon.com/s?ie=UTF8&page=1&rh=i:aps,k:vampire+diaries
Blu-ray Seasons 1-5 - The Vampire Diaries - Seasons One to Five - Blu-Ray, Reg.A/B/C Import - United Kingdom

Vampire - The Vampire Diaries Wiki - Wikia
vampirediaries.wikia.com/wiki/Vampire
Vampires are magically reanimated human corpses which are inhabited by the spirits of the...

Old APIs

Web Images Videos News

7,980,000 RESULTS

Official Site of The CW Network | CW Television Shows | CW TV
www.cwtv.com
Official site of The CW Television Network, featuring The Flash, Jane The Virgin, iZombie, Arrow, The Vampire Diaries, Supernatural, The Originals, Crazy Ex ...

The Vampire Diaries (TV Series 2009-) - IMDb
www.imdb.com/title/tt1405406
Created by Julie Plec, Kevin Williamson. With Nina Dobrev, Paul Wesley, Ian Somerhalder, Kat Graham. A teenage girl is torn between two vampire brothers.

The Vampire Diaries - Wikipedia, the free encyclopedia
https://en.wikipedia.org/wiki/The_Vampire_Diaries
The Vampire Diaries is an American supernatural drama television series developed by Kevin Williamson and Julie Plec, based on the popular book series of the same ...

The Vampire Diaries - Episode Guide - TV.com
www.tv.com/shows/the-vampire-diaries/episodes
The Vampire Diaries episode guides on TV.com. Watch The Vampire Diaries episodes, view pictures, get episode information, cast, join the conversation and more.

The Vampire Diaries Video - Kill 'Em All | Watch Online Free
www.cwtv.com/shows/the-vampire-diaries
The Vampire Diaries Video: Watch the Vampire Diaries full episodes, previews, clips, interviews and more video. Two vampire brothers - one good, one evil - are at war ...

The Vampire Diaries | The Official Site
vampirediaries.com
Here's What Your Zodiac Sign Reveals About Your Personality 12 Foolproof Ways To Kill A Vampire (According To Hollywood)

The Vampire Diaries TV Show: News, Videos, Full Episodes ...
www.tvguide.com/tvshows/vampire-diaries/297527
Watch full episodes of The Vampire Diaries and get the latest breaking news, exclusive videos and pictures, episode recaps and much more at TVGuide.com

Watch The Vampire Diaries Online - at Hulu
www.hulu.com/the-vampire-diaries
Watch The Vampire Diaries online. Stream episodes and clips of The Vampire Diaries instantly.

Amazon.com: vampire diaries
www.amazon.com/s?ie=UTF8&page=1&rh=i:aps,k:vampire+diaries
Blu-ray Seasons 1-5 - The Vampire Diaries - Seasons One to Five - Blu-Ray, Reg.A/B/C Import - United Kingdom

Vampire - The Vampire Diaries Wiki - Wikia
vampirediaries.wikia.com/wiki/Vampire
Vampires are magically reanimated human corpses which are inhabited by the spirits of the...

1 2 3 4 5 →

Related searches
Full Episodes of Vampire Diaries Season 7
Vampire Diaries Season 8 Confirmed
Vampire Diaries Season 1 Full Episodes Free
Vampire Diaries Cast
Vampire Diaries Cancelled 2016
Vampire Diaries TV CW Season 7
Vampire Diaries Season 7 Free
Vampire Diaries Season 7 Episode 1

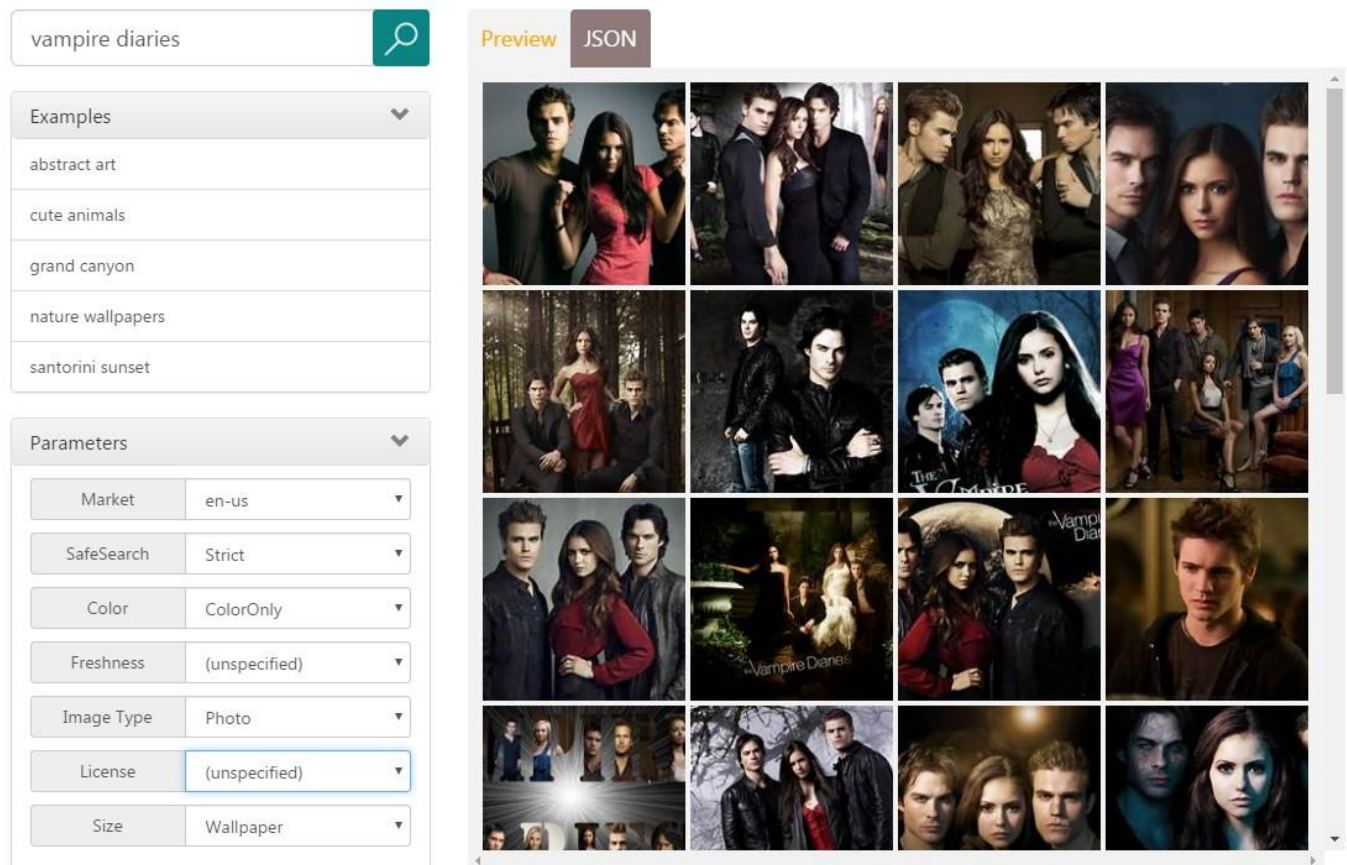
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1 2 3 4 5 →

Screenshot showing the search results returned from the Bing Web Search API v5 and the old Bing Search API v2. - [Live Demo](#)

The new [Bing Web Search API](#) returns search results containing Web pages, images, videos, news, and more. The results also contain enhanced search details including (but not limited to) related searches, deep links for the 1st result, ranked answers, image captions, instant answers, and spelling suggestions.

Bing Image Search API



The screenshot displays the Bing Image Search API interface. On the left, there is a search input field containing the text "vampire diaries" and a magnifying glass icon. Below the search field are two sections: "Examples" and "Parameters". The "Examples" section lists several search terms: "abstract art", "cute animals", "grand canyon", "nature wallpapers", and "santorini sunset". The "Parameters" section contains several dropdown menus: "Market" (en-us), "SafeSearch" (Strict), "Color" (ColorOnly), "Freshness" ((unspecified)), "Image Type" (Photo), "License" ((unspecified)), and "Size" (Wallpaper). On the right side of the interface, there are two tabs: "Preview" (selected) and "JSON". Below the tabs is a grid of 12 image thumbnails related to the search query "vampire diaries". The thumbnails show various scenes and characters from the TV show "The Vampire Diaries".

Screenshot of the search results returned using the Bing Image Search API - [Live Demo](#).

The [Bing Image Search API](#) features new capabilities including (but not limited to):

- Enhanced filters - Size, license, style, color, etc.
- Machine-generated image captions - Image captions providing information about the image.
- Trending images – API returns a list of trending images from around the world.
- Recipe sources - API returns a list of recipes for cooking the food shown in the image.
- Visually similar images - API returns a list of images visually similar to the original image.
- Similar products - API returns a list of images containing a product similar to a product shown in the original image.
- Entity recognition - API returns a list of entities (people) recognized in the image.

Bing Video Search API

The [Bing Video Search API](#) includes new features such as motion thumbnail preview and trending videos. Motion thumbnail preview is a static or motion (animated GIF) thumbnail for the video. Trending videos is a list returned by the API of trending videos from around the world.

Bing News Search API

The new [Bing News Search API](#) includes new features such as categorization and trending news. The API can return a list of news that is categorized based on a topic such as world, politics, sports, etc. Trending news is a list returned by the API of trending news from around the world.

Bing Autosuggest API

The new [Bing Autosuggest API](#) returns a list of suggested search queries when a partial search query is submitted to Bing. Developers can use this API to support an auto-suggest search box feature of a website or application.

Google vs. Microsoft Bing Search APIs

Below are charts comparing some of the key features of Google CSE, Google Site Search, Microsoft Bing Web Search API (v5), and the old Microsoft Bing Search API (v2). There is a separate chart comparing API image search features.

Please note that Microsoft plans on announcing pricing for the new Bing Search APIs (Microsoft Cognitive Services) this summer. These APIs are replacements for the old Microsoft Bing Search APIs (v2) which will be deprecated in the near future.

To create a side-by-side comparison, online public information such as company websites, developer websites, API documentation, developer forums, Twitter and other sources, was reviewed.

The comparison charts were created using Google Charts, which is part of the [Google Visualization API](#).

Search APIs Comparison - Web Search

	Google Custom Search Engine	Google Site Search	MS Cognitive Services Bing Web Search API	Old Bing Search API
Pricing				
Free tier/ freemium plan	100 search queries/day	X	Up to 1,000 transactions/mo. across all Bing Search APIs	Up to 5,000 transactions/mo.
Lowest priced paid plan	\$5 per 1,000 queries 10,000 queries/day max.	\$100/yr for 20,000 search queries/year	Paid plans to be announced Summer 2016	Up to 10,000 transactions/mo. for \$20.00/mo.
API data formats				
JSON	✓	✓	✓	✓
XML	X	✓	X	✓
Search Options				
Search entire web	Select URLs to search	X	✓	✓
Site search	✓	✓	✓	✓
Search Results				
Customize look and feel	✓	✓	X	X
Multilingual	✓	✓	✓	✓
Thumbnails	✓	✓	✓	✓
Spelling suggestions	✓	✓	✓	✓
Related search suggestions	X	X	✓	✓
Filter search results by age	✓	✓	✓	✓
Rich snippets/ web page metadata	✓	✓	metadata	metadata
Customize results snippets *	X	✓	✓	X
Deep links (for 1st result)	X	X	✓	X
Location and market-aware results	✓	✓	✓	✓
Ranked answers *	✓	✓	✓	X
Ad-free results	X	✓	✓	✓
Option to remove search provider branding	X	✓	X	X
Advanced Features				
Synonyms	✓	✓	✓	✓
Enable autocomplete/ autosuggest	✓	✓	Use Bing Autosuggest API	X
Enable safe search	✓	✓	✓	✓
Instant answers	✓	X	✓	X
Trending (news, images, videos)	X	X	Use Bing News, Video, Image Search APIs	X

- **Customize results snippets** - **Google**: You can create your own snippets showcasing specific information such as image thumbnails, summaries, dates, authorship, ratings, etc. --- **Bing**: Text highlighting/bolding can be enabled.
- **Ranked Answers** - **Google**: Results can be adjusted by three means: keywords, weighted labels, and scores. --- **Bing**: Search results and answers can be ranked and arranged to fit the website/application layout. Ranked answers include image, video, news, math, and time.
- **Filter search results by age**. - Filter results based on the date and time the web pages were discovered by the search engine (day, week, month).
- **Location and market-aware results** - The search results are customized based on the location or market of the user. The location or market can be configured explicitly or can be determined implicitly based on IP address.
- **Instant Answers** - Use relevant instant answers e.g. calculator, time zone, etc.

Search APIs Comparison - Image Search

	Google Custom Search Engine	Google Site Search	MS Cognitive Services Bing Image Search API	Old Bing Search API
Image-only search	X	✓	✓	✓
Image metadata	✓	✓	✓	✓
Enhanced filters: size, license, style, color, etc.	✓	✓	✓	X
Trending images	X	X	✓	X
Machine-generated image captions	X	X	✓	X
Entity recognition	X	X	✓	X
Recipe sources	X	X	✓	X
Merchant/shopping sources (where to buy)	X	X	✓	X
Visually similar images	X	X	✓	X
Similar products	X	X	✓	X

- **Machine-generated image captions** - Image captions providing information about the image.
- **Entity recognition** - List of entities (people) recognized in the image.
- **Recipe sources** - List of recipes for cooking the food shown in the image.
- **Visually similar images** - List of images visually similar to the original image.
- **Similar products** - List of images containing a product similar to a product shown in the original image.

Conclusion

When it comes to feature-packed Web search APIs, there are really only two providers to choose from at this time: Google and Microsoft. Both companies are leaders in the search engine market and both companies use artificial intelligence, machine learning, and other advanced technologies to power their products and services.

The Web search APIs provided by Google and Microsoft include many of the same features. However, Microsoft recently released new and improved Bing Search APIs and the Microsoft Image Search API includes a number of advanced image search capabilities not available in Google CSE or Google Site Search.

Choosing which Web search platform and API(s) are best for your project depends on the Web search features required, goals for the project, and budget. The best way to choose between Google and Microsoft Bing search products and APIs is to check out the online demos and try out the APIs provided by both companies.

Please be sure to check out part one of this article: "[The Current State of Web Search APIs](#)"

Disclaimer: The information used to create the Web search APIs side-by-side comparison charts was obtained shortly before the time of publication. The data used, pricing and other product information provided in this article were accurate at the time of publication.