

Quickstart: Suggest search queries with the Bing Autosuggest REST API and C#

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In this article

[Prerequisites](#)

[Create an Azure resource](#)

[Create a Visual Search Solution](#)

[Create and send an API request](#)

[Example JSON response](#)

[Next steps](#)

[See also](#)

Follow this quickstart to learn how to make calls to the Bing Autosuggest API and read the JSON response. This simple C# application sends a partial search query to the API, and returns suggestions for searches. While this application is written in C#, the API is a RESTful Web service compatible with most programming languages. The source code for this sample is available on [GitHub](#).

Prerequisites

- Any edition of [Visual Studio 2017 or later](#).
- If you're using Linux/macOS, this application can be run using [Mono](#).

Create an Azure resource

Start using the Bing Autosuggest API by creating one of the following Azure resources.

Bing Autosuggest resource

- Available through the Azure portal until you delete the resource.
- Use the free pricing tier to try the service, and upgrade later to a paid tier for production.
- Bing Autosuggest is also offered in paid tiers of the [Bing Search v7 resource](#).

Multi-service resource

- Available through the Azure portal until you delete the resource.
- Use the same key and endpoint for your applications, across multiple Cognitive Services.

Create a Visual Search Solution

1. Create a new console solution in Visual Studio. Then, add the following namespaces into the main code file.

C#

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```
using System;  
using System.Collections.Generic;  
using System.Net.Http;  
using System.Net.Http.Headers;  
using System.Text;
```

2. In a new class, create variables for your API host and path, [market code](#), and a partial search query. Use the global endpoint in the following code, or use the [custom subdomain](#) endpoint displayed in the Azure portal for your resource.

C#

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```
static string host = "https://api.cognitive.microsoft.com";  
static string path = "/bing/v7.0/Suggestions";  
static string market = "en-US";  
static string key = "your-api-key";  
  
static string query = "sail";
```

Create and send an API request

1. Create a function called `Autosuggest()` to send a request to the API. Create a new `HttpClient()`, and add your subscription key to the `Ocp-Apim-Subscription-Key` header.

C#

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```
async static void Autosuggest()  
{  
    HttpClient client = new HttpClient();  
    client.DefaultRequestHeaders.Add("Ocp-Apim-Subscription-Key", key);
```

```
//..  
}
```

2. In the same function above, create a request URI by combining your API host and path. Append your market to the `mkt=` parameter, and your query to the `query=` parameter. Be sure to URL-encode your query.

C#

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```
string uri = host + path + "?mkt=" + market + "&query=" +  
System.Net.WebUtility.UrlEncode (query);
```

3. Send the request to the uri constructed above, and print the response.

C#

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```
HttpResponseMessage response = await client.GetAsync(uri);  
  
string contentString = await response.Content.ReadAsStringAsync();  
Console.WriteLine(contentString);
```

4. In the main method of your program, call `Autosuggest()`.

C#

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```
static void Main(string[] args)  
{  
    Autosuggest();  
    Console.ReadLine();  
}
```

Example JSON response

A successful response is returned in JSON, as shown in the following example:

JSON

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```
{  
  "_type": "Suggestions",  
  "queryContext": {  
    "originalQuery": "sail"  
  },  
  "suggestionGroups": [  
    {  
      "name": "Web",  
      "searchSuggestions": [  

```

```

{
  "url": "https://www.bing.com/cr?
IG\u003d2ACC4FE8B02F4AACB9182A6502B0E556\u0026CID\u003d1D546424A4CB64AF2D386
F26A5CD6583\u0026rd\u003d1\u0026h\u003dgvtP9TS9NwhajSapY2Se6y1eCbP2fq_GiP2n-
cxi60Y\u0026v\u003d1\u0026r\u003dhttps%3a%2f%2fwww.bing.com%2fsearch%3fq%3ds
ailrite%26FORM%3dUSBAPI\u0026p\u003dDevEx,5003.1",
  "displayText": "sailrite",
  "query": "sailrite",
  "searchKind": "WebSearch"
},
{
  "url": "https://www.bing.com/cr?
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lE7dTY\u0026v\u003d1\u0026r\u003dhttps%3a%2f%2fwww.bing.com%2fsearch%3fq%3ds
ail%2bsand%2bpoint%26FORM%3dUSBAPI\u0026p\u003dDevEx,5004.1",
  "displayText": "sail sand point",
  "query": "sail sand point",
  "searchKind": "WebSearch"
},
{
  "url": "https://www.bing.com/cr?
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  "query": "sailboats for sale",
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2R_BoA\u0026v\u003d1\u0026r\u003dhttps%3a%2f%2fwww.bing.com%2fsearch%3fq%3ds
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  "query": "sailing anarchy",
  "searchKind": "WebSearch"
},
{
  "url": "https://www.bing.com/cr?
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B1GG5qtBGnoU1Bizz02YKkg5fgAQthWhXn4z8I\u0026v\u003d1\u0026r\u003dhttps%3a%2f
%2fwww.bing.com%2fsearch%3fq%3dsailpoint%26FORM%3dUSBAPI\u0026p\u003dDevEx,5
007.1",
  "displayText": "sailpoint",
  "query": "sailpoint",
  "searchKind": "WebSearch"
},
{
  "url": "https://www.bing.com/cr?
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F26A5CD6583\u0026rd\u003d1\u0026h\u003dqBMwmKlGwqC5wAU0K7n416plhWcR8zQC7r-

```

```

Fw9Y0w\u0026v\u003d1\u0026r\u003dhttps%3a%2f%2fwww.bing.com%2fsearch%3fq%3ds
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    "query": "sailflow",
    "searchKind": "WebSearch"
},
{
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ailboatdata%26FORM%3dUSBAPI\u0026p\u003dDevEx,5009.1",
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    "query": "sailboatdata",
    "searchKind": "WebSearch"
},
{
    "url": "https://www.bing.com/cr?
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F26A5CD6583\u0026rd\u003d1\u0026h\u003deSSt0MRSb12V0RFPSuVd-
gC7fGOT4717pz55EBUgPec\u0026v\u003d1\u0026r\u003dhttps%3a%2f%2fwww.bing.com%
2fsearch%3fq%3dsailor%2b2025%26FORM%3dUSBAPI\u0026p\u003dDevEx,5010.1",
    "displayText": "sailor 2025",
    "query": "sailor 2025",
    "searchKind": "WebSearch"
}
]
}
]
}
}

```

Next steps

[Bing Autosuggest tutorial](#)

See also

- [What is Bing Autosuggest?](#)
- [Bing Autosuggest API v7 reference](#)

Is this page helpful?

 Yes  No