

A national geocoding API in the Netherlands

The Dutch "Locatieserver" is a good practice example of a geocoding service API requested by the GSGF principle 2. It is hosted by the Dutch hosting organization PDOK organized by the Dutch Cadastre. The API will return different type of objects based on search strings. It can return an object-id from the Dutch Base registry for Addresses and Buildings (BAG) and in the future, it will return also other feature types like Statistical Units (neighbourhoods and districts).

It works for one search at a time, but because it is developed as an API, it can be used in programs that can geocode a whole list of addresses.

A Dutch description of the API can be found at GitHub:

<https://github.com/PDOK/locatieserver/wiki/API-Locatieserver>

The basic URL for using the API is:

<https://geodata.nationaalgeoregister.nl/locatieserver/v3/suggest?q=<search string>>

It distinguishes several parameters like explained below:

q=<search string>

Example q="Gouda"

Optional: fl=<filed name>

Example fl=centroide_ll (will only give the Lat Long coordinates)

Optional: sort=<sort method>

"score desc", "sortering asc", "weergavenaam asc"

Optional: rows=<number of results>

default = 10

Optional: start=<index>

Useful when you want to slit up search results. Default-value is "0".

Optional: wt=<format>

"json" or "xml". Default-value is "json".

Optional: indent=<value> "true" or "false".

To define the indent in json

Optional: lat=<latitude>&lon=<longitude>

Example: lat=52.09&lon=5.12

Results will be sorted in distance to this point

Optional: fq=<filter query>

Example fq=bron:BAG or fq=type:adres

An Example of a queries can be:

https://geodata.nationaalgeoregister.nl/locatieserver/v3/suggest?q=gouda&fq=type:gemeente&wt=xml&fl=centroide*

This will return the following:

```
<?xml version="1.0" encoding="UTF-8"?>
- <response>
  - <result maxScore="23.71952" start="0" numFound="1" name="response">
    - <doc>
      <str name="centroide_ll">POINT(4.70620369 52.0153015)</str>
      <str name="centroide_rd">POINT(108250.851 447657.184)</str>
    </doc>
  </result>
  - <lst name="highlighting">
    - <lst name="gem-c9c42cc32725bb507a2931c210877dcb">
      - <arr name="suggest">
        <str>Gemeente <b>Gouda</b></str>
      </arr>
    </lst>
  </lst>
  - <lst name="spellcheck">
    - <lst name="suggestions">
      - <lst name="gouda">
        <int name="numFound">4</int>
        <int name="startOffset">0</int>
        <int name="endOffset">5</int>
        - <arr name="suggestion">
          <str>golda</str>
          <str>goudb</str>
          <str>goude</str>
          <str>gouds</str>
        </arr>
      </lst>
    </lst>
  </lst>
  <lst name="collations"/>
</lst>
</response>
```

Contact information

Ir. Pieter Bresters, Geonovum, p.bresters@geonovum.nl

Drs. Niek van Leeuwen, Statistics Netherlands, n.vanleeuwen@cbs.nl or info@cbs.nl