

Datenquelle OpenStreetMap

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OpenStreetMap Projekt

OpenStreetMap.org ist ein im Jahre 2004 gegründetes internationales Projekt mit dem Ziel, eine freie Weltkarte zu erschaffen. Dafür sammeln wir weltweit Daten über Straßen, Eisenbahnen, Flüsse, Wälder, Häuser und vieles mehr.

<http://www.openstreetmap.de/>

OpenStreetMap

OpenStreetMap (OSM) ist ein kollaboratives Projekt um eine editierbare Weltkarte zu erzeugen.

Wikipedia - OpenStreetMap

OSM Map Features

http://wiki.openstreetmap.org/wiki/DE:Map_Features

Amenity

Used to map facilities used by visitors and residents. For example: toilets, telephones, banks, pharmacies, cafes, parking and schools. See the page [Amenities](#) for an introduction on its usage.















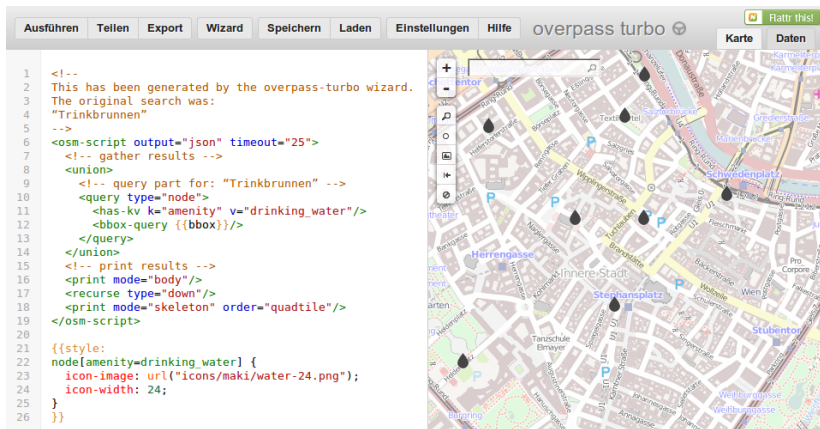
Key	Value	Element	Comment	Rendering	Photo
Sustenance					
amenity	bar		Bar is a purpose-built commercial establishment that sells alcoholic drinks to be consumed on the premises. They are characterised by a noisy and vibrant atmosphere, similar to a party and usually don't sell food. See also the description of the tags <code>amenity=pub;bar;restaurant</code> for a distinction between these.		
amenity	bbq		BBQ or Barbecue is a permanently built grill for cooking food, which is most typically used outdoors by the public. For example these may be found in city parks or at beaches. Use the tag <code>fuel=*</code> to specify the source of heating, such as <code>fuel=wood;electric;charcoal</code> . For mapping nearby table and chairs, see also the tag <code>tourism=picnic_site</code> . For mapping <code>campfires</code> and <code>firepits</code> , instead use the tag <code>leisure=firepit</code> .		
amenity	biergarten		Biergarten or beer garden is an open-air area where alcoholic beverages along with food is prepared and served. See also the description of the tags <code>amenity=pub;bar;restaurant</code> . A biergarten can commonly be found attached to a beer hall, pub, bar, or restaurant. In this case, you can use <code>biergarten=yes</code> additional to <code>amenity=pub;bar;restaurant</code> .		
amenity	cafe		Cafe is generally an informal place that offers casual meals and beverages, typically, the focus is on coffee or tea. Also known as a <code>coffeehouse/shop</code> , <code>bistro</code> or <code>sidewalk cafe</code> . The kind of food served may be mapped with the tags <code>cuisine=*</code> and <code>diet=*</code> . See also the tags <code>amenity=restaurant;bar;fast_food</code> .		
amenity	drinking_water		Drinking water is a place where humans can obtain potable water for consumption. Typically, the water is used for only drinking. Also known as a <code>drinking fountain</code> or <code>water tap</code> .		

Figure 1: osmMapFeatures

Overpass Turbo

<https://overpass-turbo.eu/>



The screenshot displays the Overpass Turbo web interface. At the top, there is a navigation bar with buttons: "Ausführen", "Tellen", "Export", "Wizard", "Speichern", "Laden", "Einstellungen", "Hilfe", and a "Flattr this!" button. The main interface is split into two panels. The left panel contains an OSM query script, and the right panel shows a map of a city area with search results overlaid.

```
1 <!--
2 This has been generated by the overpass-turbo wizard.
3 The original search was:
4 "Trinkbrunnen"
5 -->
6 <osm-script output="json" timeout="25">
7   <!-- gather results -->
8   <union>
9     <!-- query part for: "Trinkbrunnen" -->
10    <query type="node">
11      <has-kv k="amenity" v="drinking_water"/>
12      <bbox-query {{bbox}}/>
13    </query>
14  </union>
15  <!-- print results -->
16  <print mode="body"/>
17  <recurse type="down"/>
18  <print mode="skeleton" order="quadtile"/>
19 </osm-script>
20
21 {{style:
22 node[amenity=drinking_water] {
23   icon-image: url("icons/maki/water-24.png");
24   icon-width: 24;
25 }
26 }}
```

The map view on the right shows a city street grid with several black water drop icons representing drinking fountains. Labels on the map include "Herrengasse", "Stebiansplatz", "Stubentor", and "Schwedenplatz". The interface also includes a search bar, a map navigation toolbar, and tabs for "Karte" and "Daten".

Figure 2: OverpassTurbo

Query Overpass

```
node  
  [amenity=bar]  
  ({{bbox}});  
out;
```

Download von OpenStreetMap Daten

- ▶ Ausschnitte von OpenStreetMap für einzelne Städte (metro extracts)

<https://mapzen.com/data/metro-extracts/>

- ▶ Über Geofabrik lassen sich aktuelle Ausschnitte herunterladen (auch Shapefiles)

<http://download.geofabrik.de/>

- ▶ Kartendaten (openaprs)

PostgreSQL

- ▶ PostgreSQL hat den Vorteil, dass es Open-Source ist.
- ▶ Download PostgreSQL

<http://www.postgresql.org/download/windows/>

- ▶ Einführung

<https://datashenanigan.wordpress.com/2015/05/18/getting-started-with-postgresql-in-r/>

- ▶ Sehr empfehlenswert: Arbeiten mit pgAdmin III
- ▶ Beispiel: um Verknüpfung zu einer Datenbank herzustellen - Doppelklick auf den Server in pgAdmin III

PostGIS

- ▶ PostGIS Erweiterung

`http://postgis.net/install/`

```
CREATE EXTENSION postgis;
```

osm2pgsql - Import der OSM Daten in PostgreSQL

- ▶ Läuft unter Linux deutlich besser

```
osm2pgsql -c -d osmBerlin --slim -C -k berlin-latest.osm
```

Nutze bspw. QGIS um Shapefiles zu extrahieren

► Plugin OpenLayers

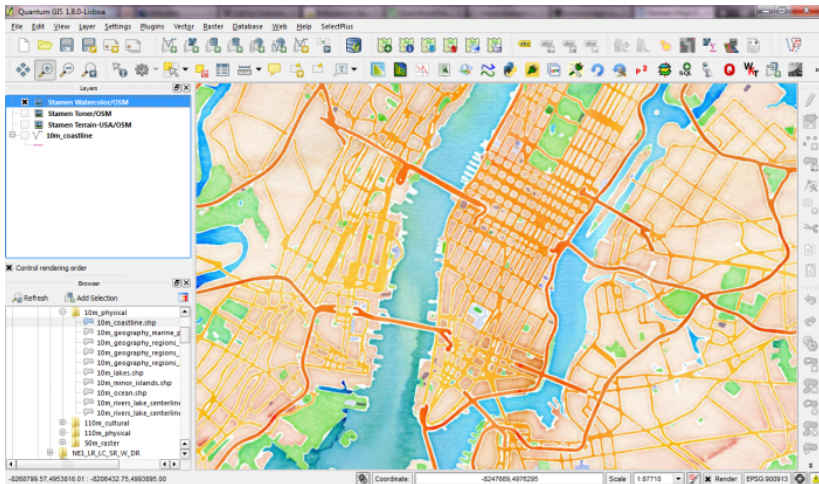


Figure 3: qgis

Links

- ▶ Wiki zum Downlaod

http://wiki.openstreetmap.org/wiki/Downloading_data

- ▶ Liste möglicher Datenquellen für räumliche Analysen (weltweit, Deutschland)

http://wiki.openstreetmap.org/wiki/Potential_Datasources

- ▶ SALB - Administrative Grenzen

<http://wiki.openstreetmap.org/wiki/SALB>