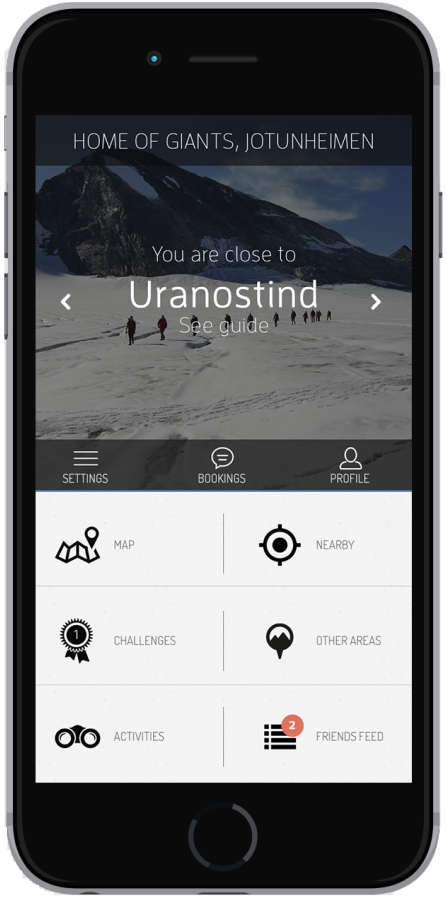
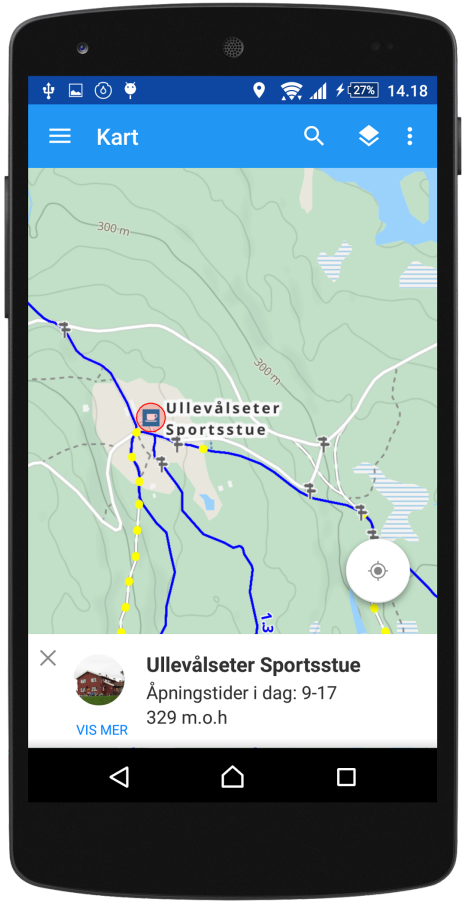
Din neste fjelltur med åpen kildekode ruteberegning

Espen Oldeman Lund
TurApp

turapp

Finn ditt neste turmål med TurApp!


HOME OF GIANTS, JOTUNHEIMEN
You are close to
Uranostind
See guide
SETTINGS
BOOKINGS
PROFILE
MAP
NEARBY
CHALLENGES
OTHER AREAS
ACTIVITIES
FRIENDS FEED


14.18
Kart
300 m
300 m
Ullevålseter
Sportsstue
Ullevålseter Sportsstue
Åpningstider i dag: 9-17
329 m.o.h
VIS MER

Åpen kildekode ruteberegnere

- Pgrouting
- Valhalla
- OpenTripPlanner
- Open Source Routing Machine
- Graphhopper

postgis

sql

PGROUTING

vektbasert

mapzen

VALHALLA

offline

multi-modal

GTFS

java

OPENTRIPPLANNER

openstreetmap

multi-modal

java

ios

android

GRAPHHOPPER

openstreetmap

cloud service

api

mapbox

C++

OSRM

api

openstreetmap

Rutebergning for tur

- Høydeforskjeller
- Underlag
- Aktivitetstype(ski, fottur, rullestol…)
- Barn/Mosjonist/Eliteutøver

Ruteberegning for skiløpere

Litt installering først...

```
git clone https://github.com/Project-OSRM/osrm-backend.git
cd osrm-backend
mkdir -p build
cd build
cmake ..
make
```

Deretter litt data...

downloads.geofabrik.de

GEOFABRIK downloads

Download OpenStreetMap data for this region:

Norway

[one level up]

Commonly Used Formats

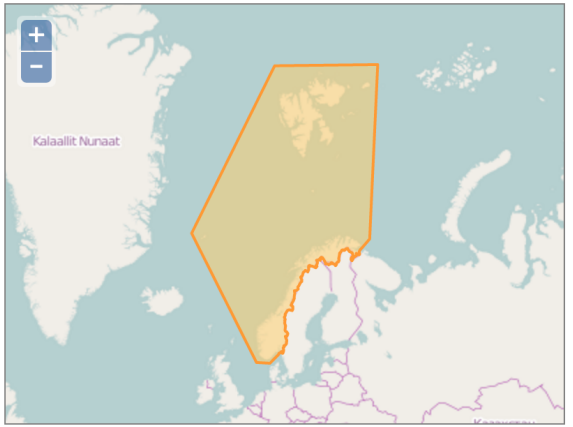
- norway-latest.osm.pbf, suitable for Osmium, Osmosis, imposm, osm2pgsql, mkgmap, and others. This file was last modified 14 hours ago and contains all OSM data up to 2015-09-21T21:22:02Z. File size: 302 MB; MD5 sum: ce3cab9eeae81da95c619b9cbc1a42ae.
- norway-latest.shp.zip, yields a number of ESRI compatible shape files when unzipped. This file was last modified 12 hours ago. File size: 298 MB.

Other Formats and Auxiliary Files

- norway-latest.osm.bz2, yields OSM XML when decompressed; use for programs that cannot process the .pbf format. This file was last modified 2 days ago. File size: 556 MB; MD5 sum: 57d81a4c8f9504557eacf9f7fccc38db.
- .poly file that describes the extent of this region.
- .osc.gz files that contain all changes in this region, suitable e.g. for Osmosis updates
- raw directory index allowing you to see and download older files

Sub Regions

No sub regions are defined for this region.



Not what you were looking for? Geofabrik is a consulting and software development firm based in Karlsruhe, Germany specializing in OpenStreetMap services. We're happy to help you with data preparation, processing, server setup and the like. Check out our web site and contact us if we can be of service.

Prosessering...

osrm-extract norway-latest.osm

osrm-prepare norway-latest.osrm

osm-routed norway-latest.osrm -p 8080

Profiler i OSRM

```
111
112 function way_function (way, result)
113
114   local nordic = way:get_value_by_key("piste:type")
115   local grooming = way:get_value_by_key("piste:grooming")
116   local route = way:get_value_by_key("route")
117   if ((nordic=='nordic' and grooming~='backcountry') or route=='ski') then
118           result.forward_speed = 120
119           result.backward_speed = 120
120           return 1
121   end
122
123   -- initial routability check, filters out buildings, boundaries, etc
124   local highway = way:get_value_by_key("highway")
125   local leisure = way:get_value_by_key("leisure")
126   local route = way:get_value_by_key("route")
127   local man_made = way:get_value_by_key("man_made")
128   local railway = way:get_value_by_key("railway")
129   local amenity = way:get_value_by_key("amenity")
130   local public_transport = way:get_value_by_key("public_transport")
131   if (not highway or highway == '') and
132     (not leisure or leisure == '') and
```

```lua
-- Foot profile

local find_access_tag = require("lib/access").find_access_tag

-- Begin of globals
barrier_whitelist = { [""] = true, ["cycle_barrier"] = true, ["bollard"] = true, ["entrance"] = true, ["cattle_grid"] =
access_tag_whitelist = { ["yes"] = true, ["foot"] = true, ["permissive"] = true, ["designated"] = true  }
access_tag_blacklist = { ["no"] = true, ["private"] = true, ["agricultural"] = true, ["forestry"] = true }
access_tag_restricted = { ["destination"] = true, ["delivery"] = true }
access_tags_hierachy = { "foot", "access" }
service_tag_restricted = { ["parking_aisle"] = true }
ignore_in_grid = { ["ferry"] = true }
restriction_exception_tags = { "foot" }

walking_speed = 1

speeds = {
  ["primary"] = walking_speed,
  ["primary_link"] = walking_speed,
  ["secondary"] = walking_speed,
  ["secondary_link"] = walking_speed,
  ["tertiary"] = walking_speed,
  ["tertiary_link"] = walking_speed,
  ["unclassified"] = walking_speed,
  ["residential"] = walking_speed,
  ["road"] = walking_speed,
  ["living_street"] = walking_speed,
  ["service"] = walking_speed
  ["track"] = walking_speed,
  ["path"] = walking_speed,
  ["steps"] = walking_speed,
  ["pedestrian"] = walking_speed,
  ["footway"] = walking_speed,
  ["pier"] = walking_speed,
  ["default"] = walking_speed
}

```

```lua
-- Foot profile

local find_access_tag = require("lib/access").find_access_tag

-- Begin of globals
barrier_whitelist = { [""] = true, ["cycle_barrier"] = true, ["bollard"] = true, ["entrance"] = true, ["cattle_grid"] =
access_tag_whitelist = { ["yes"] = true, ["foot"] = true, ["permissive"] = true, ["designated"] = true  }
access_tag_blacklist = { ["no"] = true, ["private"] = true, ["agricultural"] = true, ["forestry"] = true }
access_tag_restricted = { ["destination"] = true, ["delivery"] = true }
access_tags_hierachy = { "foot", "access" }
service_tag_restricted = { ["parking_aisle"] = true }
ignore_in_grid = { ["ferry"] = true }
restriction_exception_tags = { "foot" }

walking_speed = 1

speeds = {
  ["primary"] = walking_speed,
  ["primary_link"] = walking_speed,
  ["secondary"] = walking_speed,
  ["secondary_link"] = walking_speed,
  ["tertiary"] = walking_speed,
  ["tertiary_link"] = walking_speed,
  ["unclassified"] = walking_speed,
  ["residential"] = walking_speed,
  ["road"] = walking_speed,
  ["living_street"] = walking_speed,
  ["track"] = walking_speed,
  ["path"] = walking_speed,
  ["steps"] = walking_speed,
  ["pedestrian"] = walking_speed,
  ["footway"] = walking_speed,
  ["pier"] = walking_speed,
  ["default"] = walking_speed
}
```

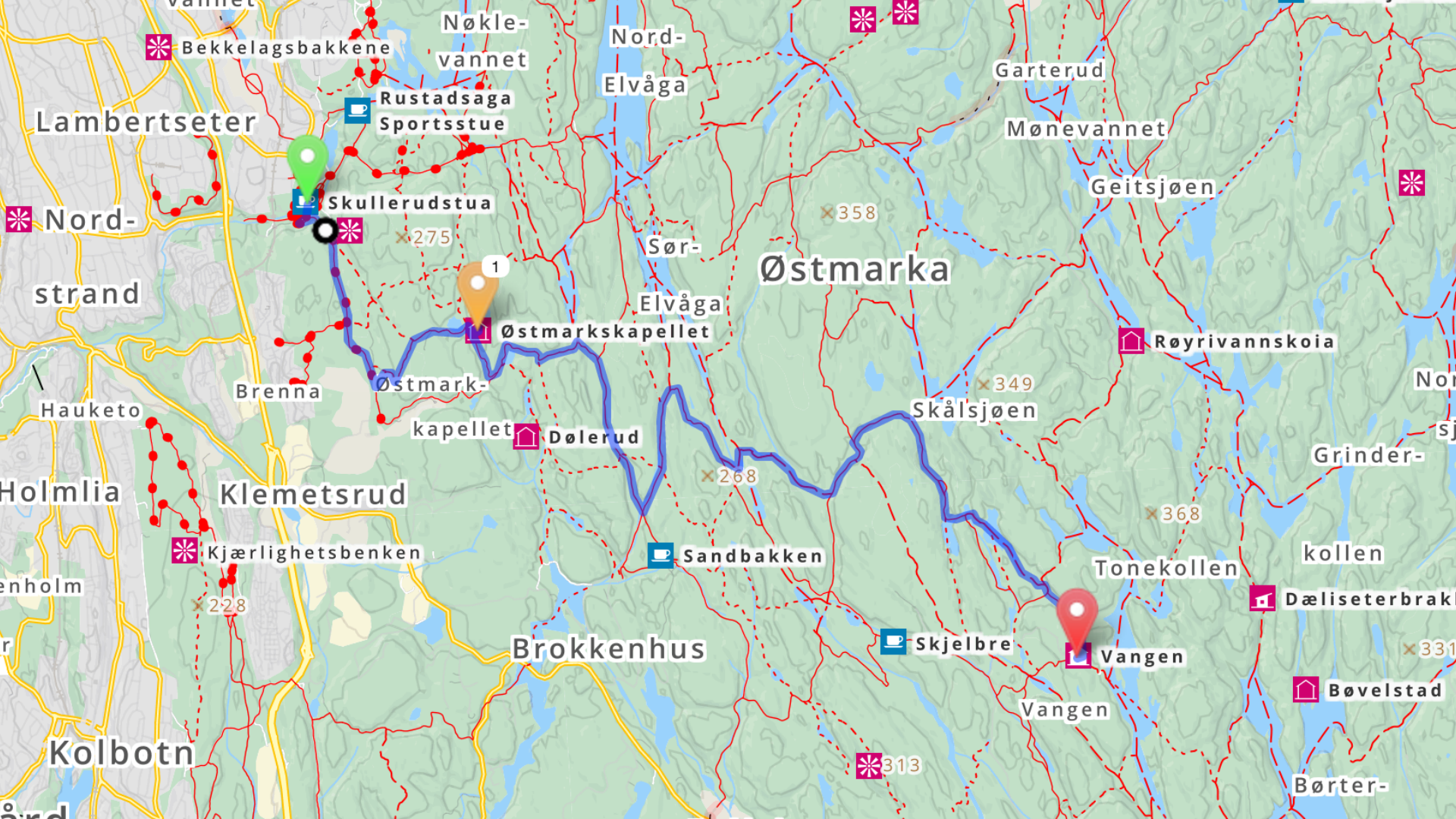
```lua
-- Nordic ski profile

local find_access_tag = require("lib/access").find_access_tag

-- Begin of globals
barrier_whitelist = { [""] = true, ["cycle_barrier"] = true, ["bollard"] = true, ["entrance"] = true, ["cattle_grid"]
access_tag_whitelist = { ["yes"] = true, ["foot"] = true, ["permissive"] = true, ["designated"] = true  }
access_tag_blacklist = { ["no"] = true, ["private"] = true, ["agricultural"] = true, ["forestry"] = true }
access_tag_restricted = { ["destination"] = true, ["delivery"] = true }
access_tags_hierachy = { "foot", "access" }
service_tag_restricted = { ["parking_aisle"] = true }
ignore_in_grid = { ["ferry"] = true }
restriction_exception_tags = { "foot" }

walking_speed = 1

speeds = {
  ["primary"] = walking_speed,
  ["primary_link"] = walking_speed,
  ["secondary"] = walking_speed,
  ["secondary_link"] = walking_speed,
  ["tertiary"] = walking_speed,
  ["tertiary_link"] = walking_speed,
  ["unclassified"] = walking_speed,
  ["residential"] = walking_speed,
  ["road"] = walking_speed,
  ["living_street"] = walking_speed,









}
```

Prosessering...

osrm-extract norway-latest.osm -p ski.lua

osrm-prepare norway-latest.osrm ski.lua

osm-routed norway-latest.osrm -p 8080


Bekkelagsbakkene
Nøkle-
vannet
Nord-
Elvåga
Rustadsaga
Sportsstue
Lambertseter
Garterud
Mønevannet
Geitsjøen
Skullerudstua
Nord-
strand
275
358
Sør-
Elvåga
Østmarka
1
Østmarkskapellet
Røyrivannskoia
Brenna
Østmark-
kapellet
Hauketo
Dølerud
349
Skålsjøen
Grinder-
268
368
Holmlia
Klemetsrud
Kjærlighetsbenken
Sandbakken
Tonekollen
kollen
228
Dæliseterbraki
Skjelbre
Vangen
Brokkenhus
Vangen
Bøvelstad
Kolbotn
313
Børter-