

Proposal for workshops – AGILE 2024

Glasgow, Tuesday 4 June 2024

<https://agile-online.org/conference-2024>

1. Workshop name/title (and acronym is applicable)

Open data and methods for assessing active mobility options: Routing in the context of bikeability and walkability

2. Description of the workshop by listing topic(s), objective(s) and planned outcome(s)

2.1 Topic(s)

routing applications; bikeability and walkability of the road infrastructure; calculating bikeable and walkable routes; data-driven methods for sustainable planning support; open source software and open data

2.2 Objective(s)

- Illustrate the potential and promote the joint use of openly available services (openrouteservice) and assessment models (NetAScore).
- Provide hands on experience of setting up and using NetAScore and openrouteservice, and using these services to conduct analysis on bikeability

2.3 Planned outcome(s)

The intended outcome of this session will be for participants to gain knowledge of the NetAScore and openrouteservice tools through introductory talks provided by the organisers and assisted hands-on tutorials relating to setting up and using these tools

3. Abstract

Fostering active mobility, such as walking and cycling, is an integral part of sustainable cities. This tutorial aims at introducing participants to the concept of walk- and bike-ability and how to use such information in spatial analysis techniques. Participants will first be introduced to the tools NetAScore and openrouteservice. NetAScore is a tool that can derive indices such as bikeability from OSM data. Openrouteservice is a routing engine that

can make use of information such as that derived from NetAScore to generate routes which prefer certain characteristics, such as pedestrian routes that favour areas with higher walkability.

After being introduced to these, participants will have the opportunity to get hands on experience of these tools. This will focus on aspects such as setting up and running openrouteservice and NetAScore on their own machines, and using openrouteservice with walk-/bike-ability information to produce routing data that can be used for further analysis.

4. Short description of the intended length (half or full day) and the format of the workshop

2 hour tutorial

In this 2 hour tutorial, participants will be introduced to two tools that can be used to evaluate the walk- and bike-ability of areas. In the first part of the tutorial, organisers will present the concept of walk- and bike-ability and what aspects of the environment can affect this. The NetAScore tool will be presented as a means of deriving walk- and bike-ability indices based on OpenStreetMap data. Openrouteservice will then also be presented as a service that can make use of the indices derived by NetAScore, primarily in the form of creating routes and reachability analysis for cyclists and pedestrians.

After the concepts and tools have been presented, participants will be provided with hands on materials to allow them to setup and use the tools on their own systems, as well as how to use a ready-made openrouteservice instance with walk- and bike-ability indices included in their own analysis.

The session will conclude with an open discussion relating to experiences of using the tools, and how participants perceive their possible use in the field of sustainable planning support.

5. Brief statement of the relevance of the workshop for AGILE

Many methods that provide data and information to support planning for sustainable mobility rely on bikeability- and walkability-based routing. Therefore, conceptual considerations as well as practical implementation of these core methods are highly relevant to support the transition to a sustainable future. We want to especially encourage the use of open and transparent methods and software for best reproducibility and inclusivity.

6. What is the approximate number of expected participants?

15

7. Names and e-mail addresses of the organizing member(s)

Leading AGILE member (or sponsor) and contact person:

University Heidelberg, Geographisches Institut, Chair of GIScience - Alexander Zipf, Christina Ludwig (christina.ludwig@uni-heidelberg.de)

Contributing AGILE members (including the persons involved) – at least one seconding AGILE member is needed:

University of Salzburg, Department of Geoinformatics - Z_GIS - Christian Werner (christian.werner@plus.ac.at) and Lucas van der Meer

Contributing non-AGILE members (including the persons involved) – if applicable:

HeiGIT gGmbH - Adam Rousell (adam.rousell@heigit.org)

Organizing Committee (if applicable):

Programme Committee (if applicable):

8. Additional information about previous workshops, if held.

Workshop “Centrality indicators for road network analysis: from concept to implementation” held by Christina Ludwig (UHEI) and Adam Rousell (HeiGIT) at the GIScience 2023 conference (Leeds, 12th September, 2023)

Workshop “NetAScore: Open Source Tool for Assessing Bikeability and Walkability based on OSM or GIP data” held by Christian Werner (University of Salzburg) at the GISalzburg 2023 conference (Salzburg, 5th July, 2023)

9. Expected resources needed

- reliable internet connection (e.g. via eduroam WiFi)
- seating with tables for approx. 15 people (participants will be requested to bring their own laptops)

10. Other information

More information on the main software packages used can be found here:

- openrouteservice: <https://github.com/GIScience/openrouteservice>
- NetAScore: <https://github.com/plus-mobilitylab/netascore>

Submission by e-mail to:

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