

THEMES FOR THE FINAL PROJECT

Course: Geospatial data management 2022

THEME 1 : MOBILITYDB for trajectory data management

MobilityDB is a recently developed Moving Object database. Guidelines: select at least 5 functions that are specific of MobilityDB and show how they can be used in an application scenario, i.e. dataset. The project can consist of a number of queries on a selected database, or be more complex. The results that can be obtained are to be described reported in the final report also showing map/tables.

Selected documentation on MobilityDB on <https://www.mobilitydb.com/>

- (1) <https://docs.mobilitydb.com/MobilityDB-workshop/master/mobilitydb-workshop.pdf> (tutorial with examples on different datasets)
- (2) <https://docs.mobilitydb.com/MobilityDB/develop/mobilitydb-manual.pdf>

Article

Esteban Zimányi, Mahmoud Sakr, and Arthur Lesuisse. 2020. MobilityDB: A Mobility Database Based on PostgreSQL and PostGIS. *ACM Trans. Database Syst.* 45, 4, Article 19 (December 2020) DOI: <https://doi.org/10.1145/3406534>

YouTube

https://www.youtube.com/watch?v=_eY3wmgKGuw

Datasets: (a) personal Google location history; (c) others: alternative datasets are possible, upon preliminary evaluation

THEME 2. Analyzing a sample of indoor trajectories

The analysis concerns a sample of few trajectories of individuals visiting an area in a museum. The localization system is based on UWB (Ultra Wide Band) and the sampling rate is high

- (a) A goal is to find where at least 1 individuals stop
- (b) (optional) to find the number of people standing together by the same exhibit

Data: few trajectories + the features representing exhibits

The data will be made available on Ariel