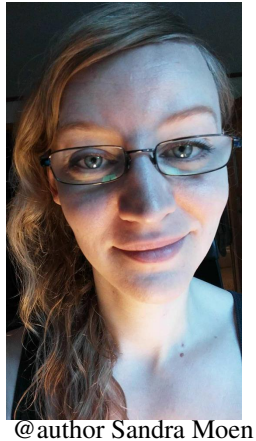
Collection of multi-source spatial
Tracking the

Influenza epidemics costs both lives and a tremendous amount of resources for any country.

This project aims to explore the possibilities to detect influenza outbreaks as soon as they are happening with the use of relevant datasets available. Information about different aspects of a citizens life on a grand scale reveals patterns and trends that could be linked to an epidemic outbreak, and thus prove useful for active measurements against further spread on a early debut.

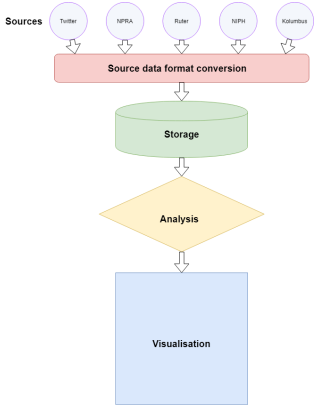
Sources is the Norwegian Public Health Institution, the Norwegian Public Roads Administration, Twitter, Kolumbus and Ruter.



@author Sandra Moen

information for emergency management

influenza



Collected sources are converted into a more convenient format to work with, that format is stored and then analysed, and lastly the results are presented visually.

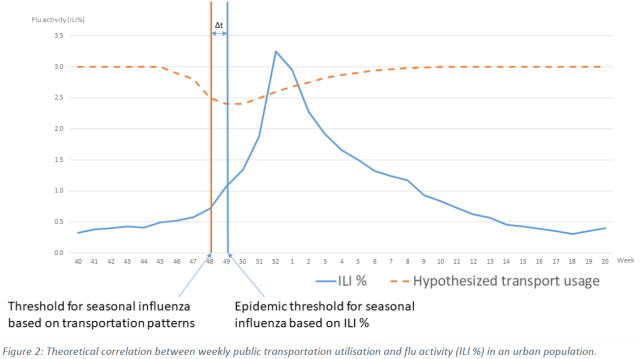
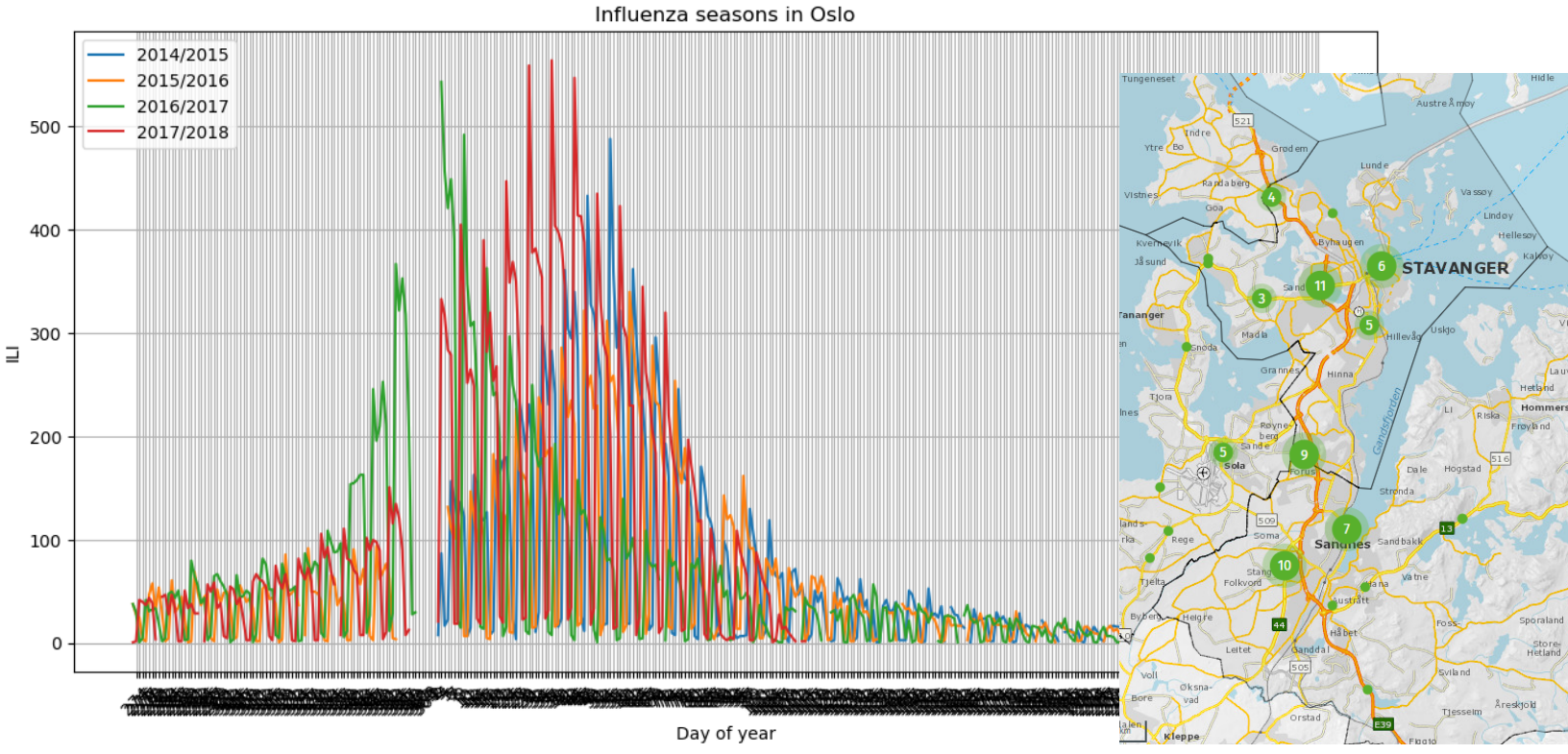


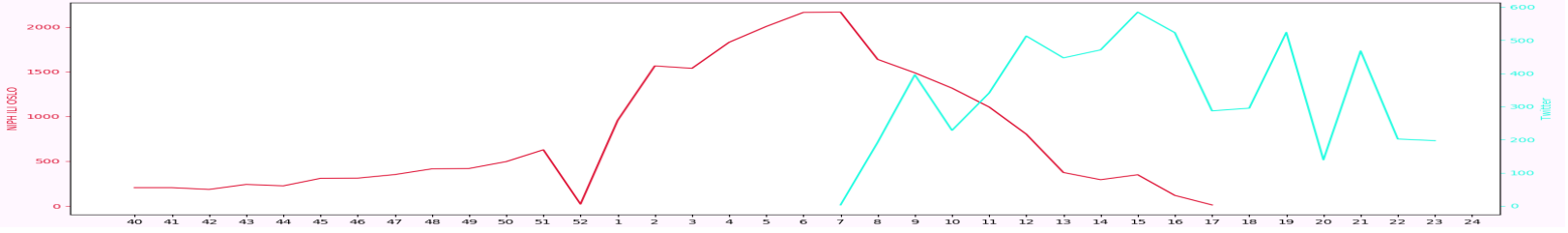
Figure 2: Theoretical correlation between weekly public transportation utilisation and flu activity (ILI %) in an urban population.

Finding a correlation between different datasets and the data from the Norwegian public health institution. When one graph drops, the other rises - if consistent this acts as a warning system.

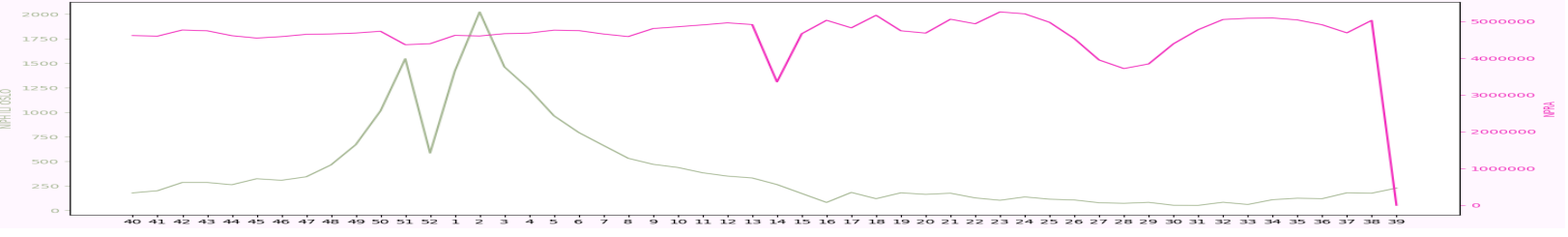


Influenza-like illnesses season 2014-2018 in Oslo. Symptoms are: fever, dry cough, runny nose, lethargy, headache and muscle pain for 3 to 10 days.

Geospatial hourly bounds of Stavanger, used for hourly data. The green dots show the location of traffic registration stations chosen which registers traffic amounts passing.



Twitter data is reliable for detecting influenza-like illnesses in the population. Here it is compared with the Norwegian Institute of Public Health influenza-like illness data of the city of Oslo for the influenza season of 2017/2018



Norwegian Public Roads Administration data compared with the Norwegian Institute of Public Health influenza-like illnesses data of the city of Oslo for the influenza season of 2016/2017.