Linking Strava with environmental and weather data

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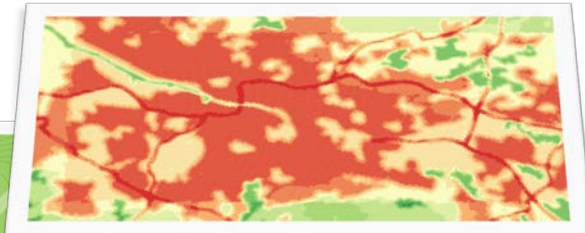*Urban Big Data Centre, Glasgow University*

Idea

- Does weather affect cycling behaviour?
- Is there a spatial and temporal heterogeneity in cycling activities ?
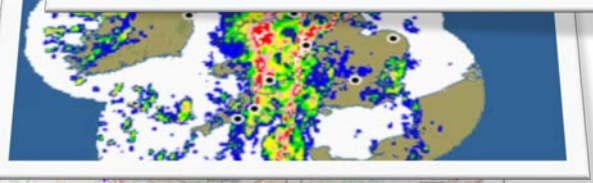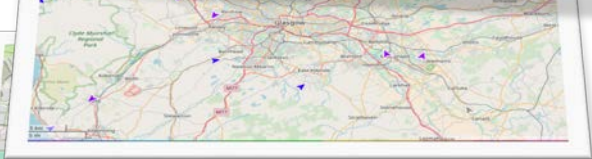
Data

Air and noise pollution data

DTM from Ordnance Survey

Landuse data – Urban Atlas plus roads

Rainfall data – CEDA

Weather data – temperature, wind etc.

Strava data -
counts of cyclists #
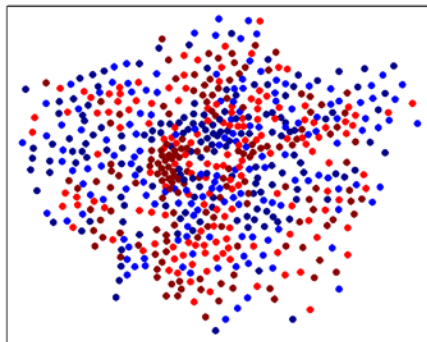at junctions

Method

Linear regression models:

GLOBAL

- Significant positive effect on total cycling activity of temperature and number of sunny hours

- Significant negative effects of rainfall and wind speed on total cycling activity

- Significant but much smaller positive effect of temperature and number of sunny hours on total commuting cycling activities

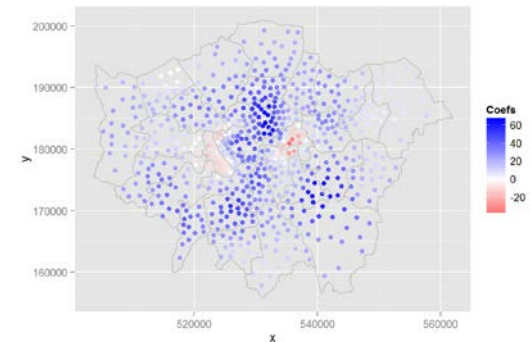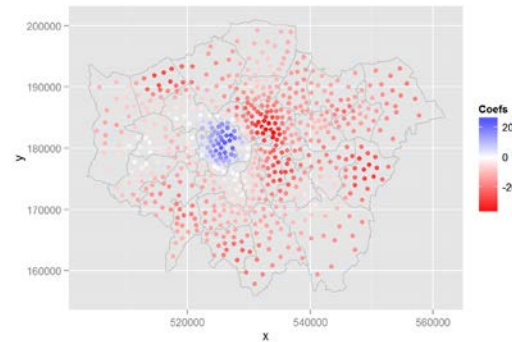- Significant almost neutral effect of rain on commuting-related cycling

Method

Geographically Weighted Regression – GWR

LOCAL

[-116.9,-8.075]
(-8.075,0.3997]
(0.3997,8.377]
(8.377,45.41]

https://rstudio-pubs-static.s3.amazonaws.com/44975_0342ec49f925426fa16ebcdc28210118.html

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Thank you for your attention

Questions ?

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