Linking Strava with environmental and weather data

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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

https://rstudio-pubs-static.s3.amazonaws.com/44975_0342ec49f925426fa16ebcdc28210118.html
Thank you for your attention

Questions?