ITT 10: How far in advance can we reliably predict traffic conditions and associated air quality?

The Airvengers (Elizabeth Arter, Nick McCullen, Lizzi Pitt, Gerhard Schagerl, Cameron Smith, Teresa Smith)



Questions

How far in advance can we reliably predict traffic conditions and associated air quality?

What percentage of cars would need to be removed to reduce a certain percentage of emissions and where should the intervention take place?

Questions

How far in advance can we reliably predict traffic conditions and associated air quality?

- What percentage of cars would need to be removed to reduce a certain percentage of emissions and where should the intervention take place?
- How can we distinguish traffic pollution from other sources of pollution in a city?

Plan for the week

Data sources from Madrid

- Air quality
- Traffic
- Weather

Plan for the week

Data sources from Madrid

- Air quality
- ► Traffic
- Weather
 - Single site case study
 - Generalise to multivariate traffic input with one air quality sensor
 - Validation using another site

Potential challenges

- Missing data
- Alignment of different spatial data sets
- ► Trade-off between overfitting and having flexible model