

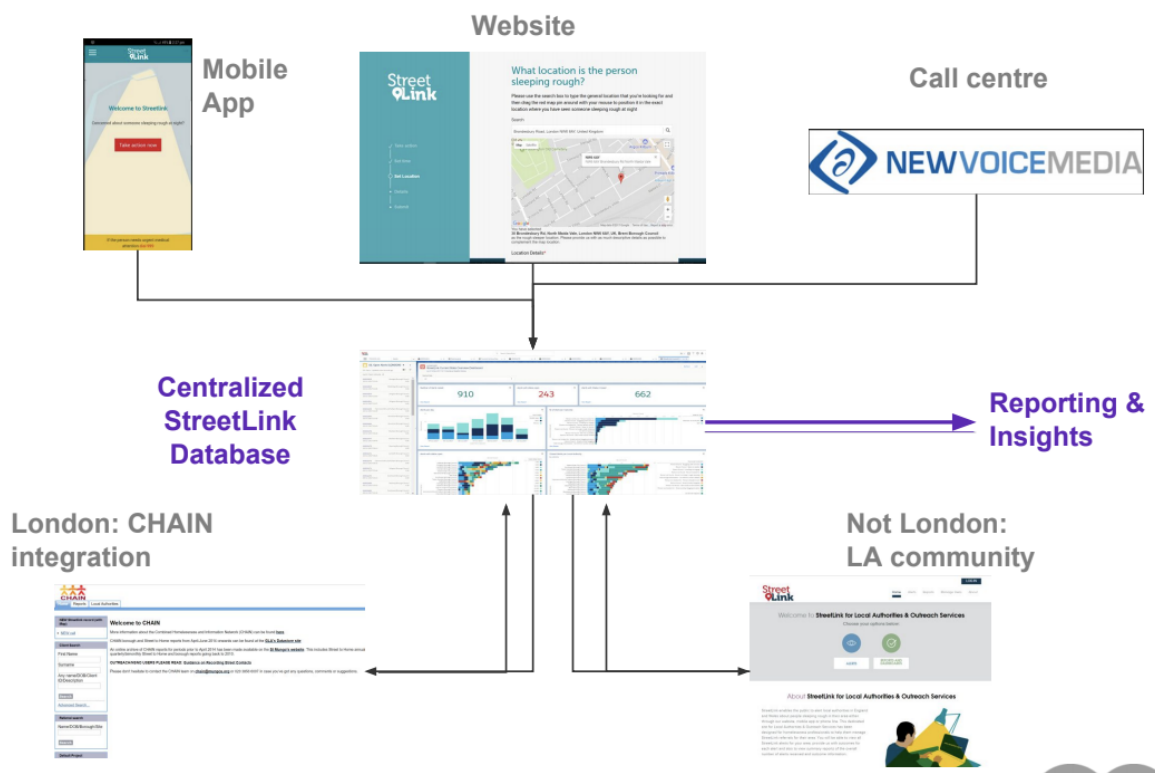
Data Science for Social Good: designing data-driven responses to homelessness

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External partner: HomelessLink

This project is aligned with the [Data Science for Social Good](#) summer programme that Warwick is running in collaboration with the Alan Turing Institute over the summer.

Since 2012, Homeless Link has been running StreetLink, a programme that helps connecting rough sleepers to local services in the whole of England and Wales. StreetLink acts as a bridge between members of the public (who provide referrals) and local authorities as well as outreach teams.



Data 123K alerts since Oct 2017, 58K referrals. Including Historic (from 2012) gives 270K / 113K

From alerting to engaging through insights

- Can we support local authorities and outreach teams with actionable insights about referrals? These could include local trends and outliers.
- High-volume periods (e.g. cold weather) make it hard to keep awareness of the bigger picture.

Methods Unsupervised learning, NLP, anomaly detection, space-time modelling

Informing better policies with fine-grained data

Goal and impact:

- Can we accurately model alerts distribution and/or likely outcomes from location and other descriptive features? Does our data allow for insightful predictions?
- Characterising the diffusion of rough sleeping is a priority both for the government (MHCLG) and policy researchers. Our data allows for finer-grained measurements than street counts run in different areas.

Methods Supervised/Semi-Supervised Learning, Dimensionality reduction, space-time modelling

Data as before, we have outcomes for 75% of the referrals

DATA

The daily-updated main dataset contains the alerts we receive from our website portal, the mobile app and the phone lines. It spans 5 years and each of the ~250K rows describes a single alert.

Fields include:

- _ the rough sleeper geolocation, as referred from the member of public
- _ the relevant local authority (we automatically assign it)
- _ other anonymous details, such as location details, time seen, the person appearance and age group
- _ the duplication status, marking alerts as “referrals” when they are not duplicated
- _ where provided, details of the member of the public that submitted the alert
- _ outcome description, provided by the local charities once they have reached out for the person