Big Data Skills and Social Science

UNIVERSITY of STIRLING

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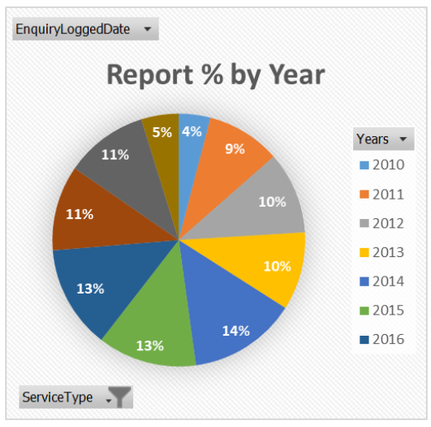
MSc in Big Data

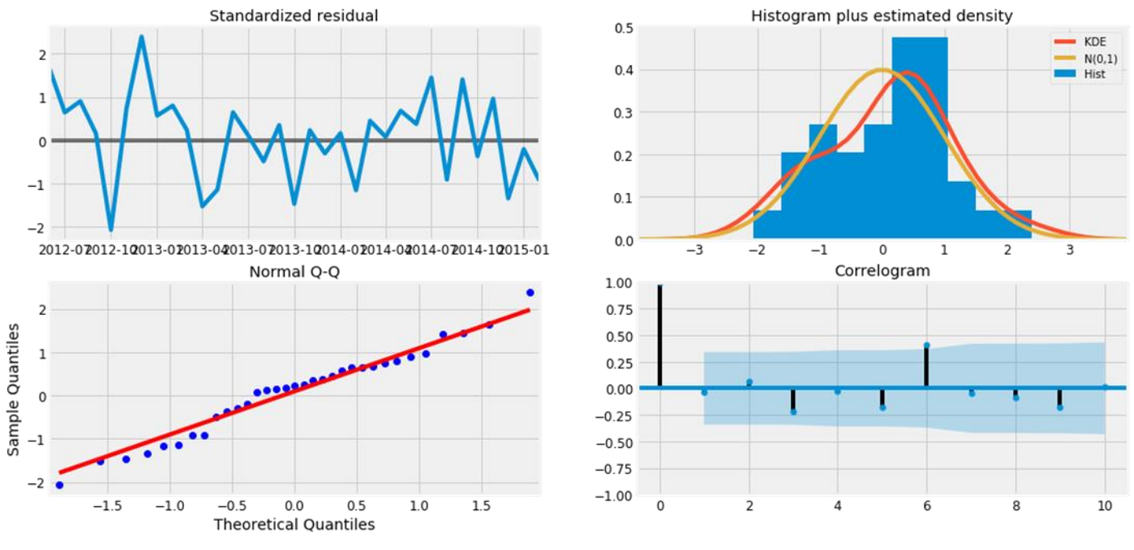


Overview

A previous research project has cleaned the data from the smartphone app FixMyStreet which allows citizens to report local problems to their councils to be fixed. The database contains over 1 million reports on a UK-wide dataset over a decade, including the nature of the report, its location and some data on whether it was fixed. Existing analysis has used social science theory (from sociology, geography and public policy) to understand the patterns.

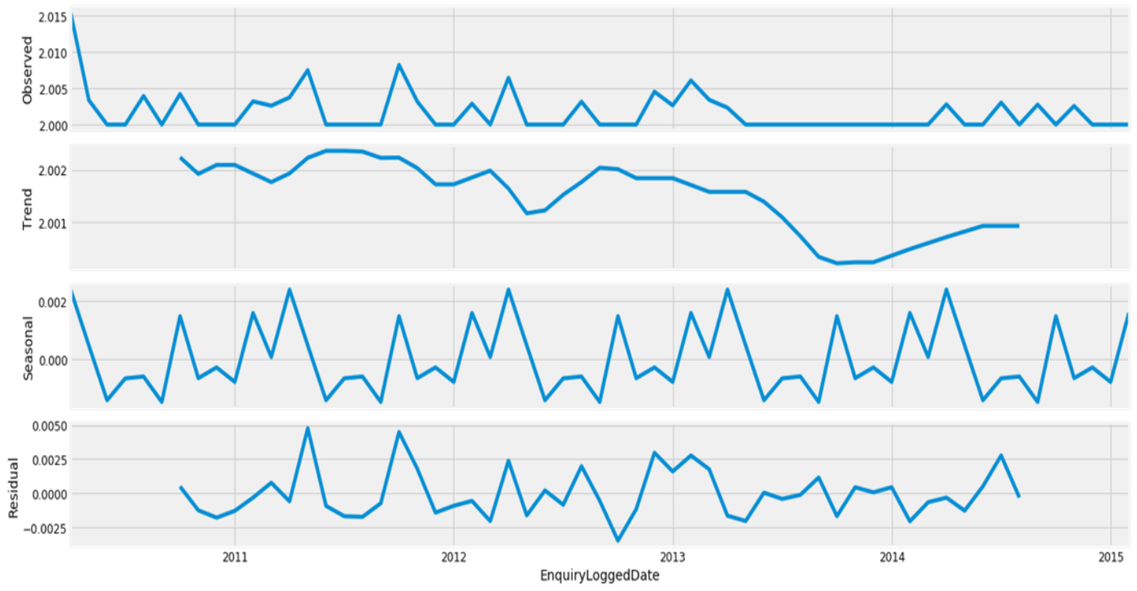
This project offered the opportunity to mine the data from a non-social science perspective to see if there are patterns not yet explored. The data will be geographically linked to other datasets offering further opportunities for analysis.

This project is in collaboration with the Faculty of Social Sciences.

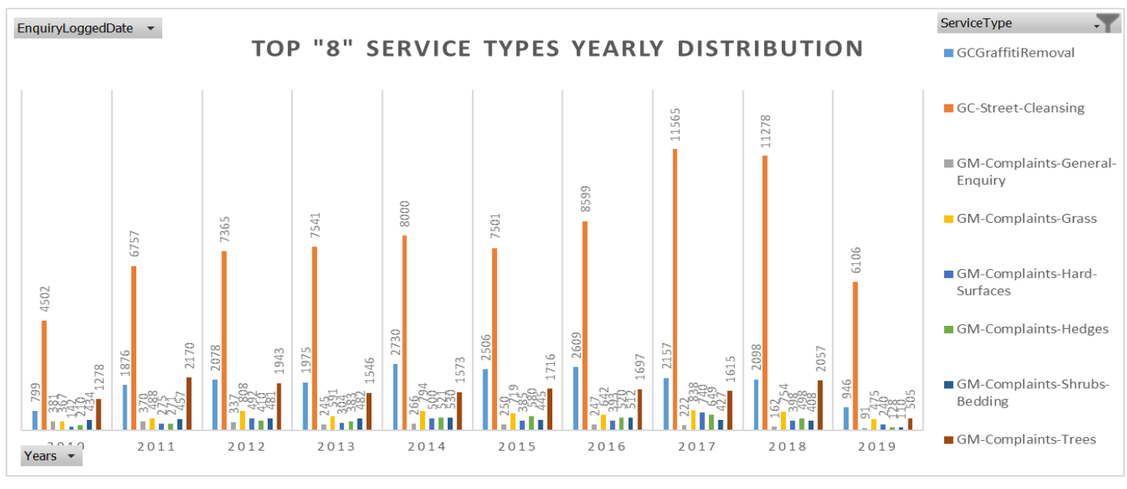


Background

The local councils are saddled with responsibilty for providing and maintaining environmentally safe and friendly neigbourhoods by keeping the streets clean and maintaining public facilities. This reseach tend to look at the reporting system and the types of issues being reported to local authorities to take action.



Some major variables have been identified that has higher reporting and impact on local evironmental quality, citizens repoting levels, demography, etc. It is hoped that the data will present more understand about patterns of local neighbourhood environmental quality, citizens engagement and the deployment of big data skill in scocial science and public policy.



Approach

Data from the FixMyStreet web portal, other mobile apps or stored CRM databases and National databases are mined to explore trends from a non-social science perspective since this data have been collected over a decade.

A trends analysis was perform using Python to extract any underlying pattern of behavior in a time series to picture the reflection on how certain local environmental factor reported in the data are represented.

This will also focus on developing dynamic dashboard using Shiny RStudio or Tableau to help answer questions from the data.

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