

DEPRIVATION ANALYSIS OF LONDON



IDENTIFYING MOST DEPRIVED WARDS FOR DEVELOPMENT

- Despite there being greater economic opportunity, there are people who have gone through great hardship through 2019 or are struggling to get by.
- This project aim to analyse and identify most deprived neighbourhoods for development in London using data science methodology and machine learning techniques.
- The results and recommendation of the projects will be useful for Charities, NGOs and local authorities to identify most deprived neighbourhoods and initiate, organise and carry out appropriate development projects for the affected areas.

DATA

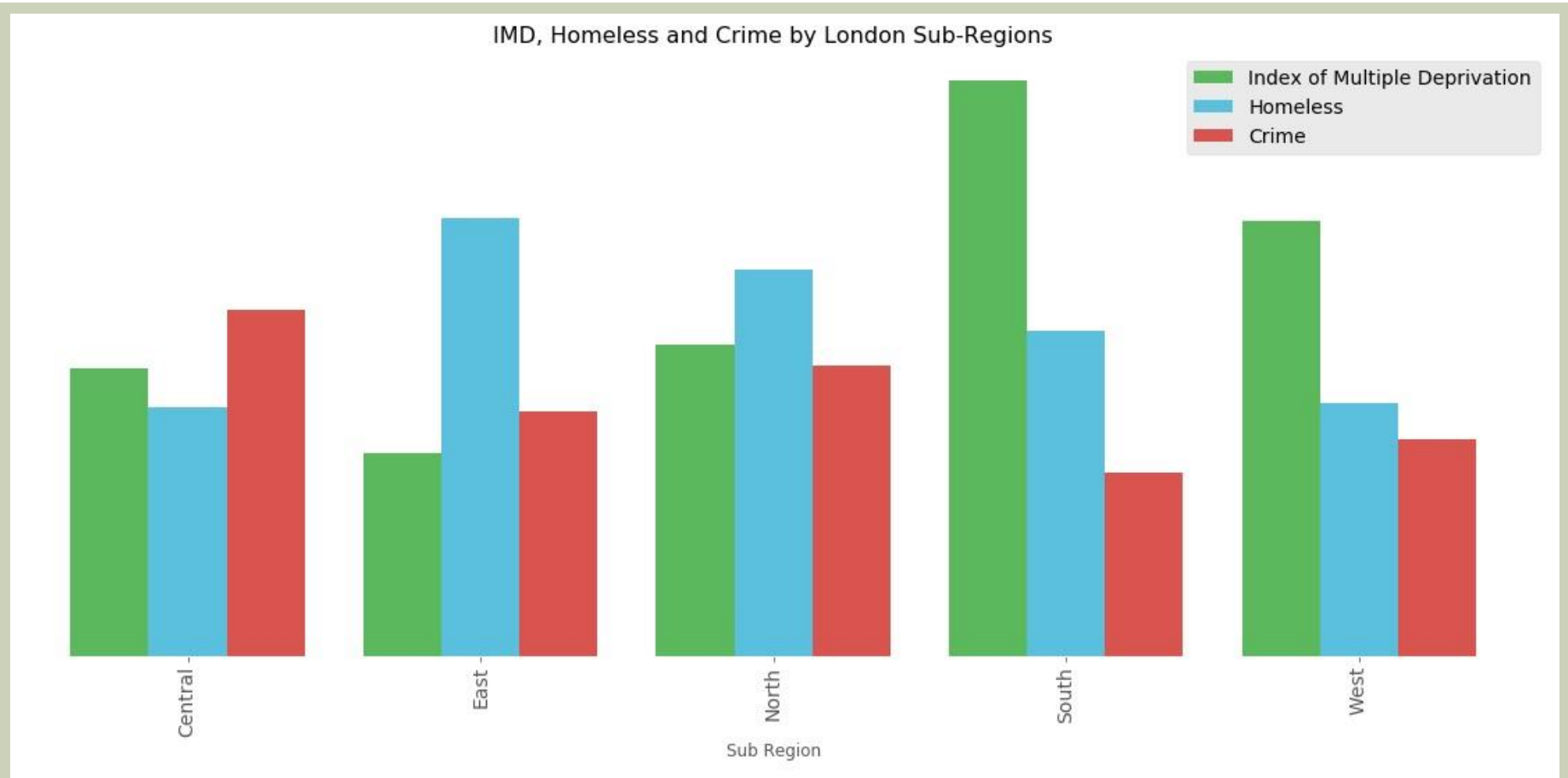
- Deprivation describes the lack of material benefits, such as a job, income, decent home and education that are generally considered to be necessary in a society. Index of Multiple Deprivation (IMD) draws together information from the following seven sources of official data, known as 'domains', to produce an overall measure of relative deprivation between one area and another
- **Postal data with IMD** from London data store. Info. including Postcode, Latitude, Longitude, Ward, District, Constituency and IMD. Along with IMD data we will also use Homelessness and recorded crime data for the analysis
- Venues from **Foursquare API** for clustering on neighbourhoods
- Geometry coordinates London geojson from GitHub
- List of London sub-regions from Wikipedia for the analysis by sub-regions of London (Central, East, North, South, West)

IMD WORD CLOUD ANALYSIS



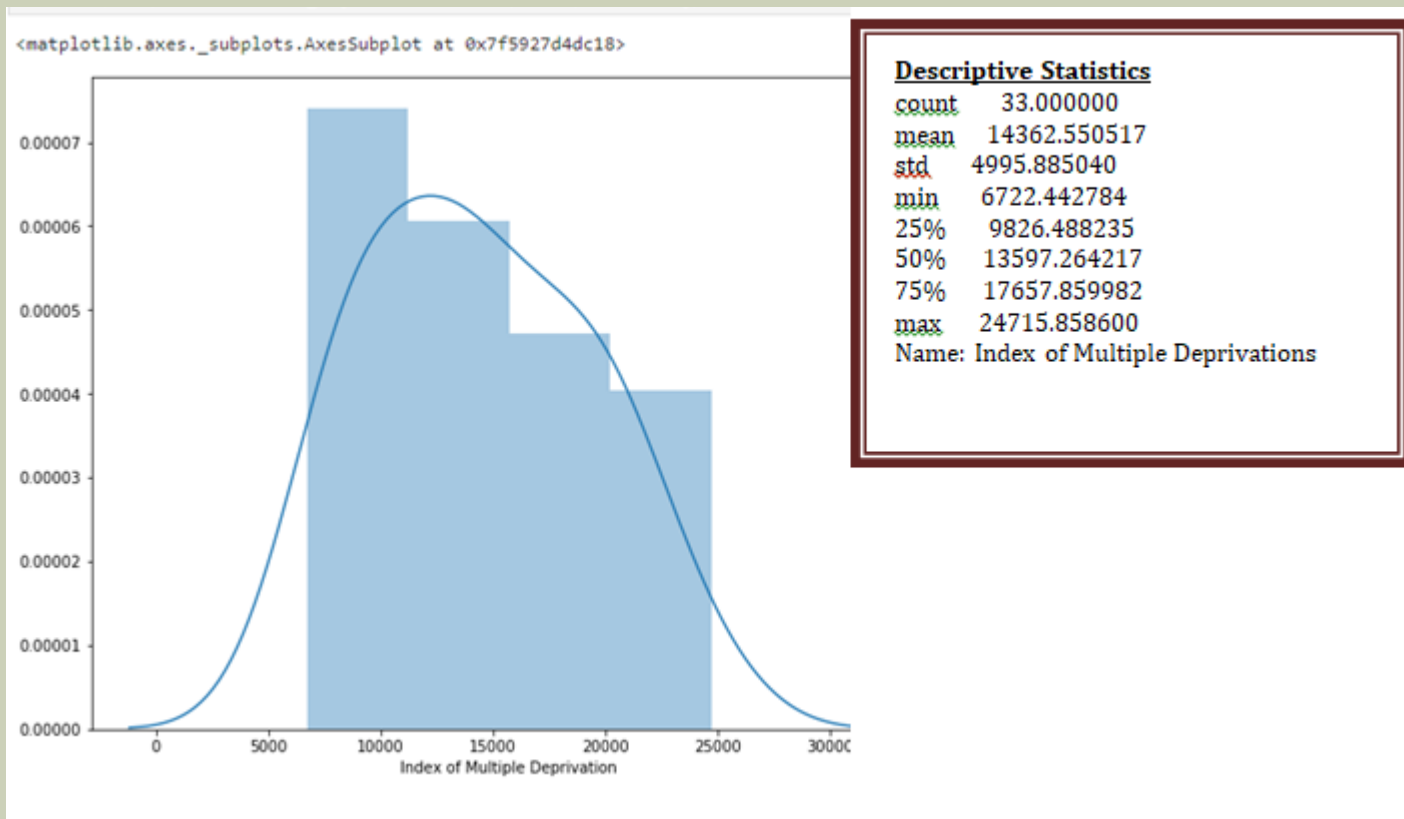
The wealthiest (IMD high) London districts are 'Richmond upon Thames, City of London, Kingston upon Thames. The most deprived (low IMD) districts are Barking and Dagenham, Hackney, Islington, Newham

SUB REGION ANALYSIS



East London sub-region is the most affected sub-region

HISTOGRAM



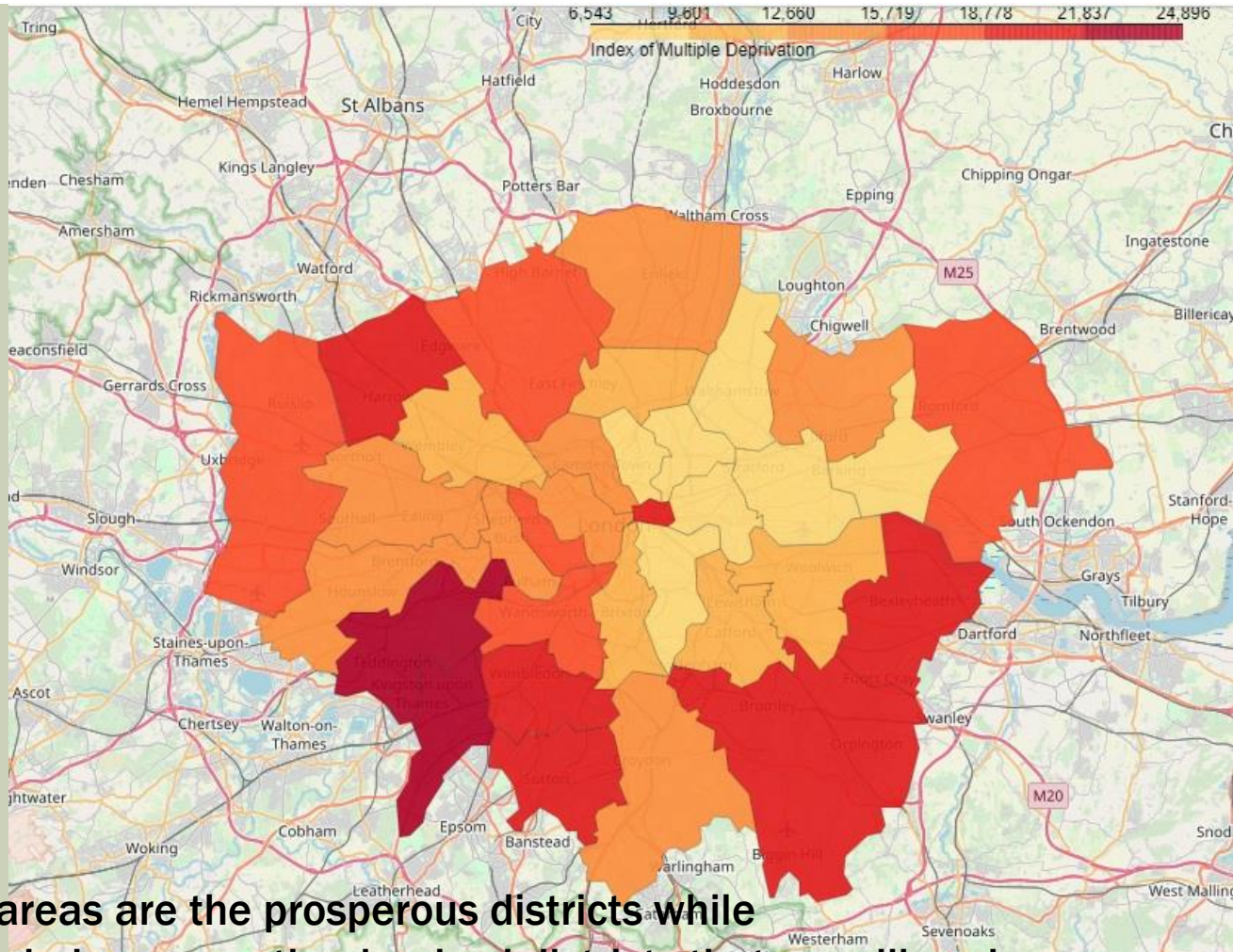
IMD High districts

'Bexley', 'Bromley', 'City of London', 'Harrow', 'Kingston upon Thames', 'Merton', 'Richmond upon Thames', 'Sutton

'IMD Low districts (most deprived)

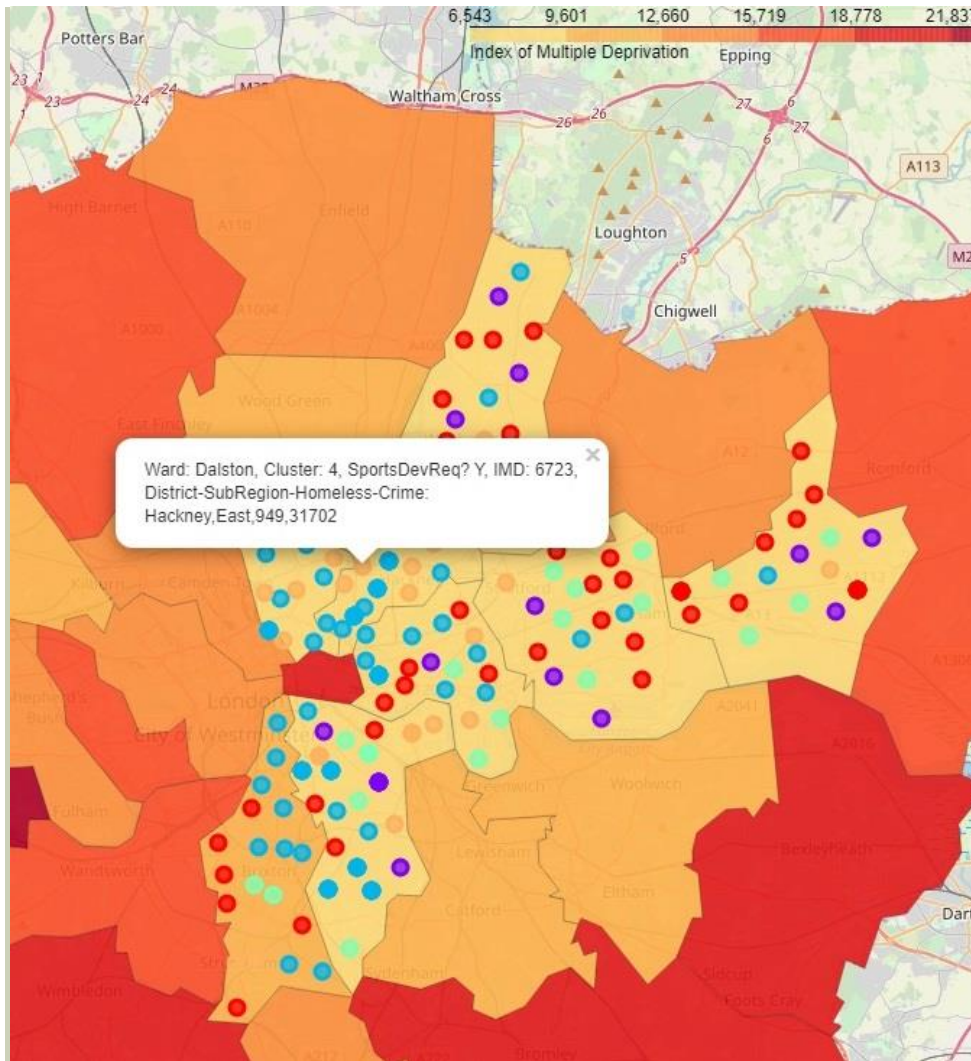
'Barking and Dagenham', 'Hackney', 'Islington', 'Lambeth', 'Newham', 'Southwark', 'Tower Hamlets', 'Waltham Forest'

CHOROPLETH MAP - IMD



The Darker areas are the prosperous districts while the light shaded ones are the deprived districts that we will explore more.

RESULTS AND CONCLUSION



Choropleth Map with Clusters of Wards that required Sports development is displayed

This study can be extended to include other development types (ex: Education) and a user-friendly Web portal can be built to assist the users

Charities, NGOs and local authorities can identify most deprived neighbourhoods and initiate, organise and carry out appropriate development projects for the affected areas that need urgent attention