Data Wireframe Commentary

I would like to delve into the world of the fire service and their response time to incidents.

I have chosen the city of New York to examine after coming upon some roadblocks with London data relating to the fire services provided to the public.

Primarily I would like to explore where their response time is slower in certain areas of the city and advise relocation or further staff.

The New York dataframe is from the New York City Open Data website (https://data.cityofnewyork.us/Public-Safety/Fire-Incident-Dispatch-Data/8m42-w767/data).

It consists of 29 columns and 8.54 million rows of structured data; the data spans from January 2005- May 2021. This is great news that it is up to date as it enables me to come to conclusions that are relevant today; a sense of satisfaction is gained from being able to affect the future and perhaps being able to help in some way.

Main Examination

The data frame provides two very handy columns 'Incident_Response_Seconds_QY' and the 'Incident_Travel_Tm_Seconds_QY'. The latter will be able to inform me if the station is located well, assuming that is usually the fire service starting point. This will hopefully yield a result where I can advise the city of locations that have a longer response time.

Whilst the former gives us an overall view of the efficiency of different locations i.e. a station that has shorter travel times but longer dispatch time is telling us to look into those stations to see what is slowing them down.

Comparing both with their respective locations is vital. The dataset also provides this via three different columns 'Borough', 'Zipcode', and 'City Council District' (depicted in further examination section below).

INCIDENT_RESPONSE_SECONDS_QY	INCIDENT_TRAVEL_TM_SECONDS_QY
242	235
297	256
301	296
229	223
302	293
269	126

Further Examination (Agile)

There are a couple other interesting points that I could delve into further;

- Linking income with location- the data frame also gives us the columns ‘Borough’, ‘Zipcode’, and ‘City Council District’. By sourcing the median income for each district we can see if there is a link.

- Fire causes (additional) data frame- I can compare our results from the initial dataframe with the fire causes data frame as they both have the ‘Borough’, ‘Zipcode’, and ‘City Council District’ columns. I can examine if there are any patterns in the boroughs i.e the boroughs with higher median income may be more likely to have candle fires. However, I must keep in mind it is a much smaller dataset (ranging from January 2016- December 2020).
  (link: https://data.cityofnewyork.us/Public-Safety/Fire-Incident-Dispatch-Data/8m42-w767)

INCIDENT_BOROUGH	ZIPCODE	POLICEPRECINCT	CITYCOUNCILDISTRICT
RICHMOND / STATEN ISLAND			
BRONX	10454	40	8
BROOKLYN	11229	61	48
BROOKLYN	11219	66	39
BRONX	10456	42	16
BROOKLYN	11212	73	41
BROOKLYN	11207	83	37

(fire causes dataframe pictured above, and fire incident dispatch database pictured below)

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I can possibly use three different columns for location, I will have to examine which one is the most suitable.