SMM635 — Data Visualisation

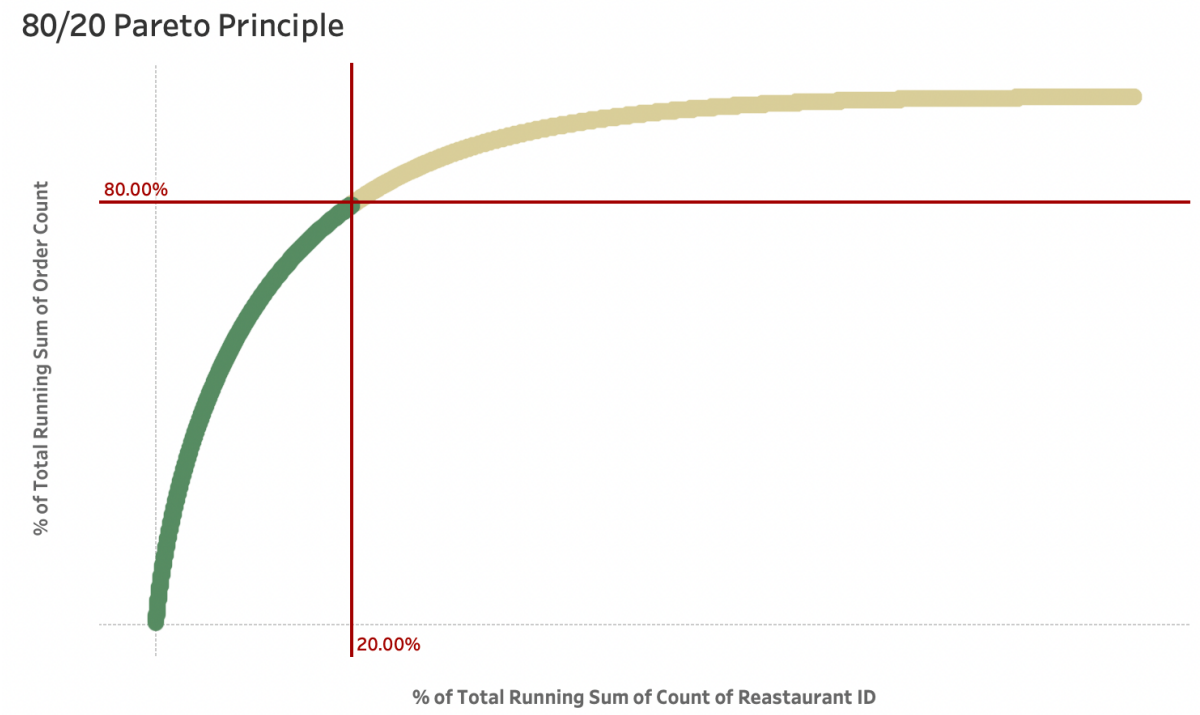
Final course project

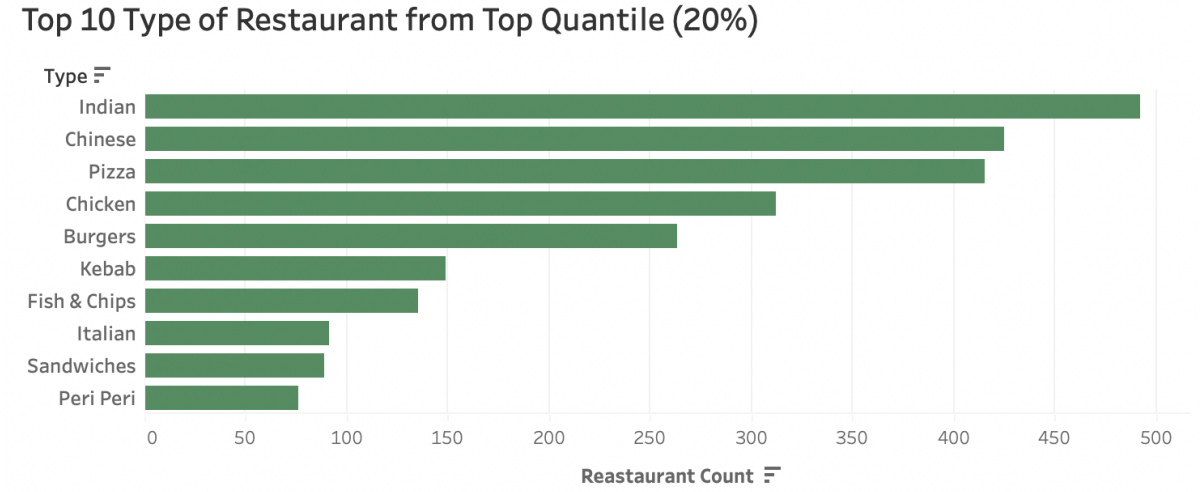
If you plan to start your new restaurant,
this is '4 tips to win on online food delivery platform'.

Visualisation #1

What is the potential type of restaurant to open?

'4 tips to win on online food delivery platform' (for restaurant owner)





Companion description (max 200 words)

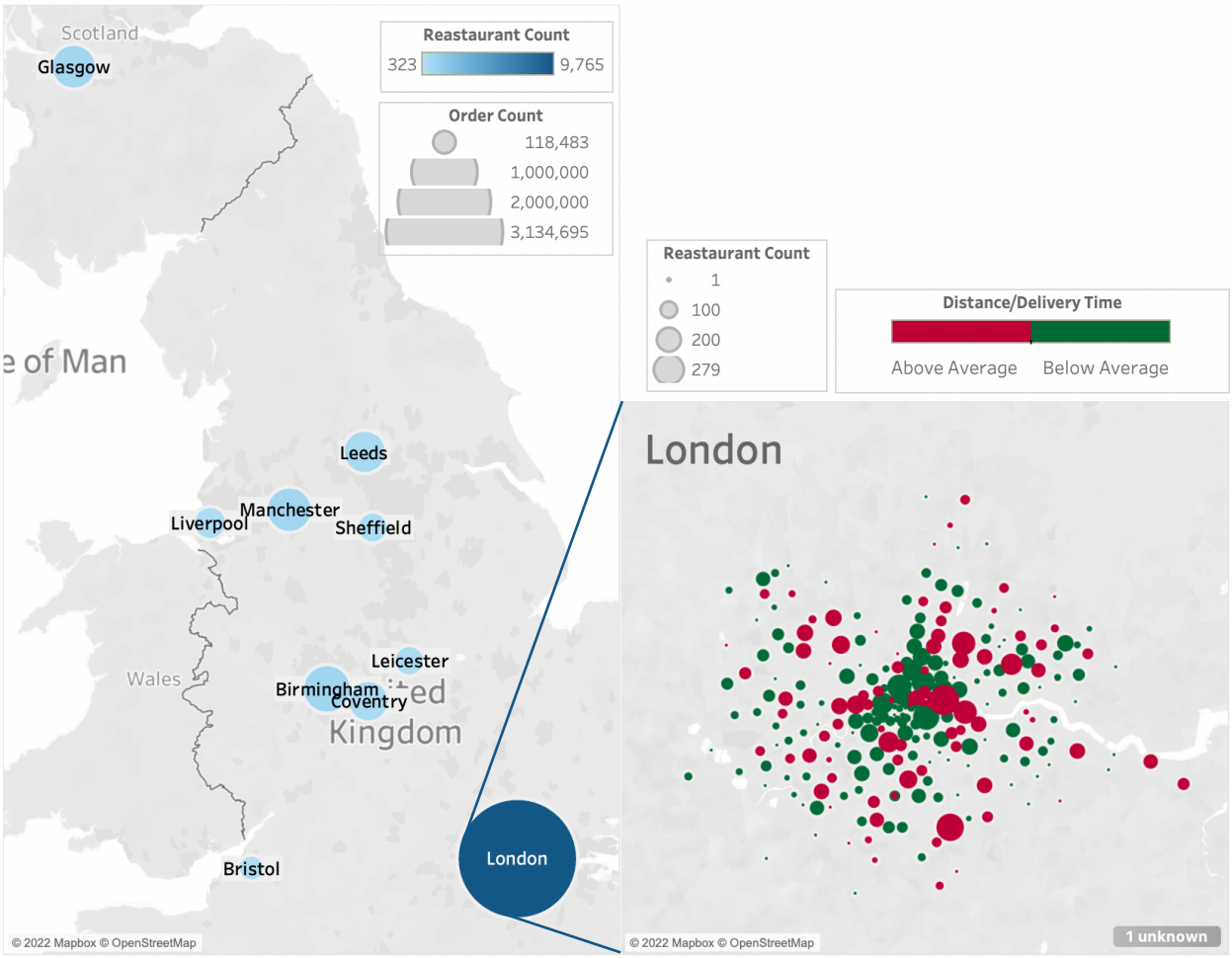
A very first question which spring into one's mind, when they think about setting new restaurant business is 'What kind/type of food should they sell?' This visualisation provides the insight which can help you made the right decision.

The upper part of visualisation shows the restaurants are indeed following the 80/20 rule, the Pareto Principle, where just 20% of restaurants generated 80% of total order. Then, this top 20% restaurant are investigated their type and showed in the lower part of the visualisation as top 10 types from 134 types in total which considered as the potential ones for choosing as your new restaurant business aiming to win on online food delivery platform.

Visualisation #2

Where to locate your new restaurant?

'4 tips to win on online food delivery platform' (for restaurant owner)



Companion description (max 200 words)

Location plays an important role in the restaurant business. This visualisation suggests the location of choice for your new restaurant.

The insight from the left map is that London is the city where the greatest number of restaurants have and the most order were generated, which it can be seen obviously by the darkest colour and the largest size respectively.

Next on the right, London is considered regarding the average delivery speed of each area by postcode (calculated by distance divided by delivery time) and compare to the average speed of entire London. According to the comparison, it can be separated as two group:

Green area – area's average speed is below London's average speed (faster)

Red area – area's average speed is above London's average speed (slower)

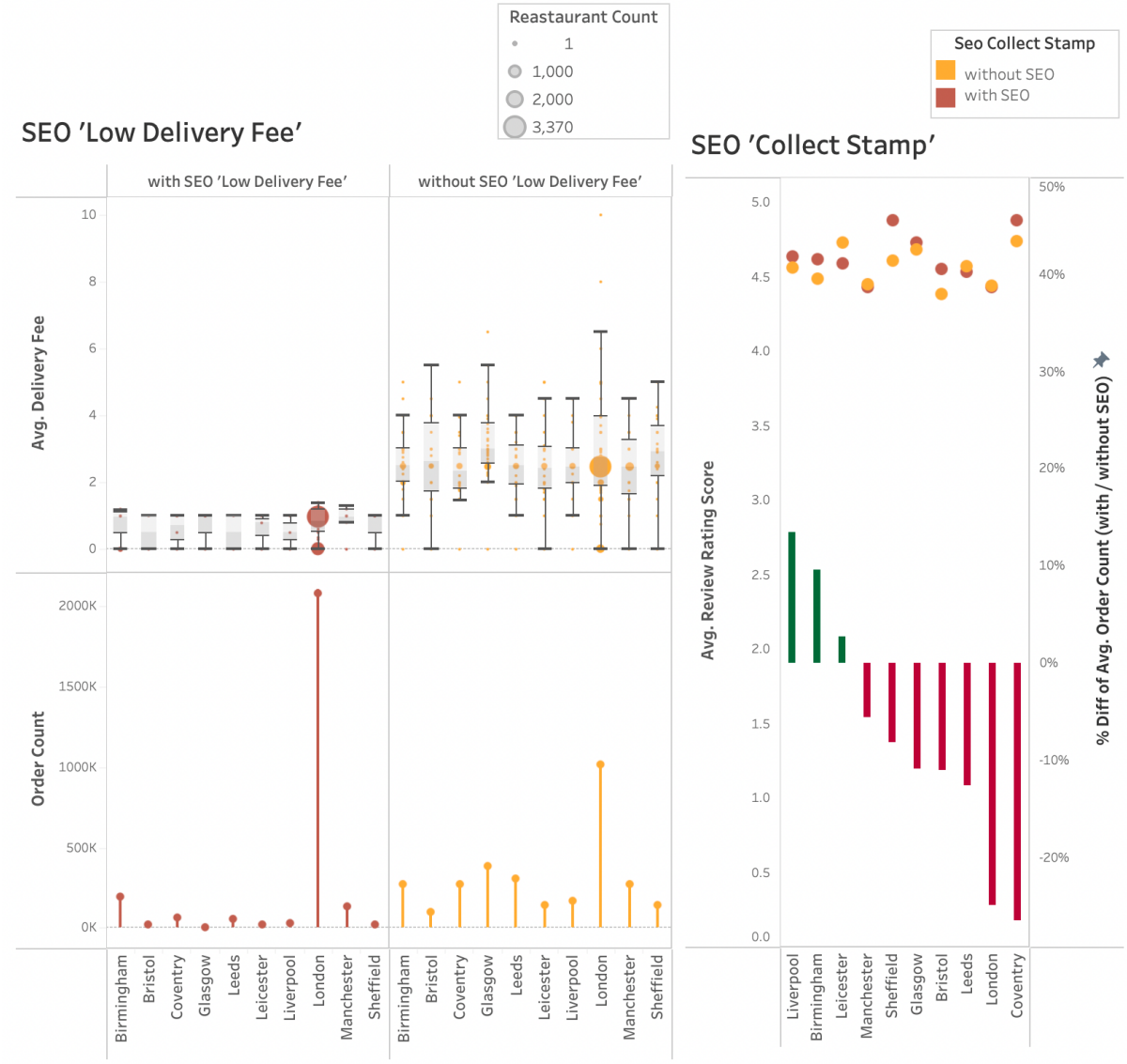
Therefore, it could be better the choose the location in the green area for your restaurant because the fast delivery is better in keeping food temperature and taste to consumers.

Example of green area: N13, N8, N4, N22, NW1, W2, SW5 and SE1

Visualisation #3

Is it worth to pay for SEOs on food delivery platform?

'4 tips to win on online food delivery platform' (for restaurant owner)



Companion description (max 200 words)

SEO stands for 'Search Engine Optimization' which means the restaurant can increase its visibility when consumer search for menu or type of restaurant related to your restaurant on food delivery consumer application.

Basically, the restaurants need to pay for SEOs on online food delivery platform. There are four types of SEOs provided in this dataset, which are "low delivery fee", "collect stamp", "local legends" and "halal". Only 'low delivery fee' and 'collect stamp' are paid SEOs. This visualization provides some insights showing whether the SEOs are worth to pay or not?

SEO 'Low Delivery Fee' (left)

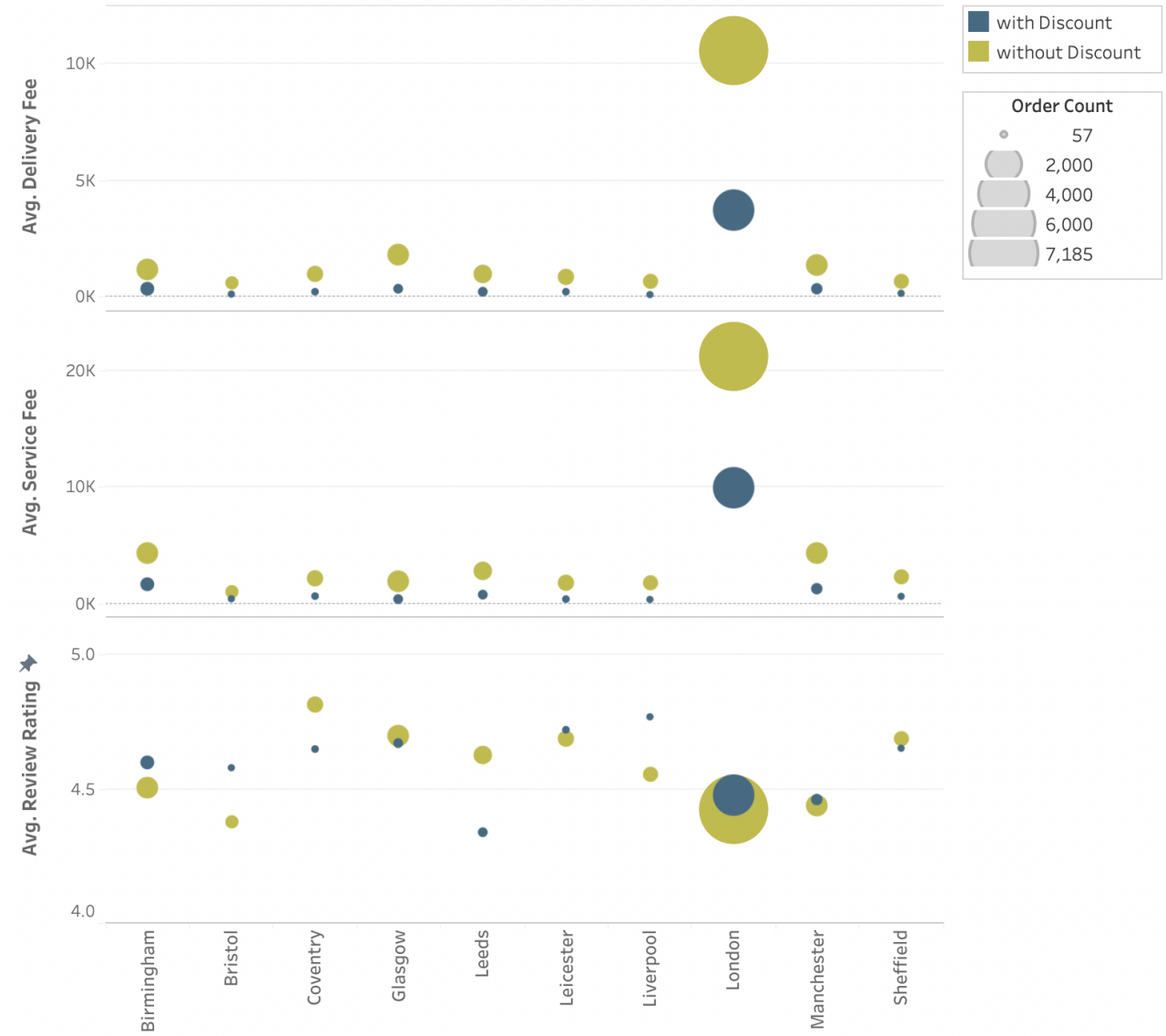
Overall, it is proved that restaurants with the SEO have the lower delivery fee than the ones without. The SEO affects *positively* to number of orders for restaurant only in London.
So, it tends to be worth to pay for SEO "low delivery fee" if your restaurant is in London.

SEO 'Collect Stamp' (right)
The SEO affects *positively* to number of orders for restaurant in Liverpool, Birmingham, and Leicester. There is no trend or relationship between with or without SEO and consumer satisfaction. It tends to be worth to pay for SEO "Collect Stamp" if your restaurant is in Liverpool, Birmingham, and Leicester.

Visualisation #4

Is offering food discount a good idea?

'4 tips to win on online food delivery platform' (for restaurant owner)



Companion description (max 200 words)

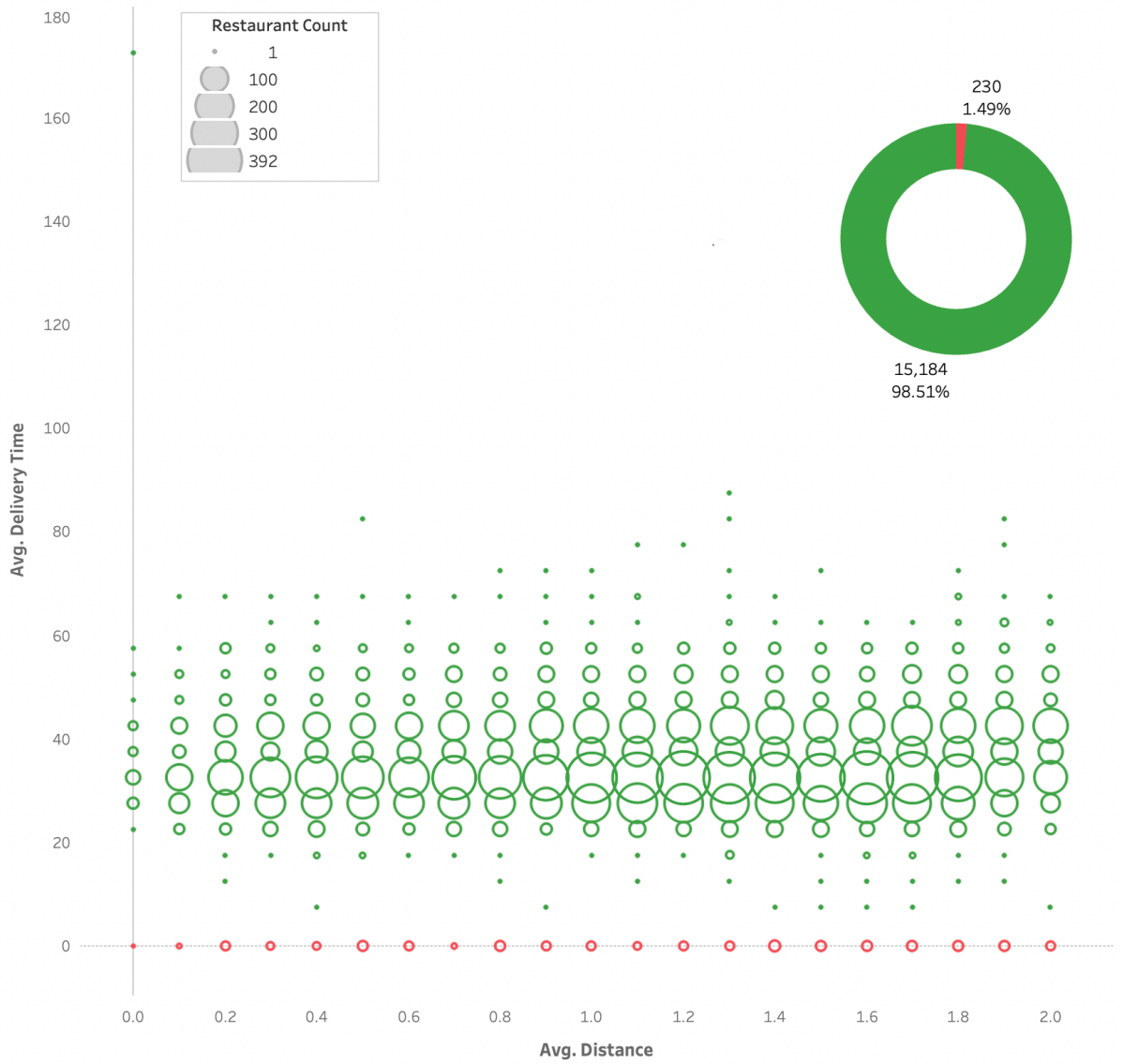
This visualization illustrates the comparison between restaurants which offer food discount to consumers and the ones without food discount, which can help to answer the question 'Is it a good idea to offer food discount to the consumers?'

The average delivery fee and service fee of the restaurants which offer food discount are lower than the ones without discount in all operating areas, although the food discount was not applied with delivery and service fee. Apparently, the consumers of restaurants with food discount tend to be promo hunters and/or price sensitive consumers. To maintain them, the restaurants offering food discount need to remain their low delivery fee and service fee as it can be seen from the visualization. Interestingly, the restaurants without discount could generate more orders than the ones offering discount in the entire areas.

In term of consumer satisfaction, there is no clear trend or relationship between the review rating score and discount offering. Then, it can be assumed that it is not necessary to offer the food discount.

Visualisation #5

Data Quality Issue



Companion description (max 200 words)

For creating visualisation, I selected the dataset regarding to the restaurants on 'Justeat' online food delivery platform, an online food delivery platform. The data attributes include: "searchedzipcode","searchedcategory","searchedlat","searchedlng","locname","locnumber", "address","cuisines","offers","deliveryfeeraw","deliveryfee","deliverytimeraw","deliverytime", "servicefeeraw","servicefee","distance","reviewcount","review_rating".

There is a data quality issue in term of reasonableness of some data points. The visualisation shows that some entities have 'distance' without 'delivery time', 1.49% of total entities, which I marked them as a quality issue of this data set. I consider them as an issue because it is impossible that riders move with certain 'distance', but they do not spend any seconds on their ride.

Moreover, the reason why I did not recognise the entities showing ‘delivery time’ without ‘distance’ as a data quality issue is that it can be happened by consumers order food on ‘Justeat’, then they go and pickup from merchant or even rider at the restaurant, which make ‘distance’ equal to zero. (Consumers may made order on application to get on-app discount.)

Data source: https://www.kaggle.com/datasets/polartech/justeat-restaurant-data