CAPSTONE PROJECT (WEEK 3 & 4)

THE BATTLE OF THE NEIGHBORHOODS

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# Problem Description:

### We want to gain insight into the question if in a certain city, there is unused potential for opening a new venue, which type of venue and in which neighborhood.

### We will try to gain insight into this by using the idea that to frequent occurrence of some types of businesses in a certain area, lead to new opportunities for other businesses as well, e.g. an area with a lot of bars should have a lot of potential for some restaurants being profitable as well in the same area.

### A simple idea would be to try to use the number of certain types of venues (i.e. bars, clubs, clubs, restaurants, food trucks), which occur in a neighborhood and investigate the occurrence of each type of venue in relation to the other types of venues. If we interpret the actual number of one venue as the on average fully exploited potential, then we could try to use the training data to predict the number of one venue type from the number of other venue types in that area. If the real number is lower than the predicted number, we could interpret this as a not fully used potential for those types of values and therefore as a business opportunity. E.g. we would use the occurrence of bars and restaurants to predict from the number of bars in a certain area, the number of areas, and interpret a number of real occurrences of restaurants, which is lower than the predicted one, as unused potential for opening a restaurant.

### However the problem with this approach is, the occurrence of some venues could correlate with the occurrence of other venues, simply because of the fact that they are making use of the same business opportunity, and they are in fact competing with each other, instead of increasing the potential for one another.

# Überschrift 1

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