

**Capstone Project:**  
**Identify what venues or shops could be opened at different**  
**locations**  
**(Wolf-Dietrich Zabka)**

**Introduction and business problem**

Small businesses are the backbone of the economy: They provide most of the services we need in our everyday life. For possible founders of new restaurants or other venues one of the first and hardest choices is to pick the right place. You need to have a solid customer base in the neighborhood you locate your business in, so you should locate your business in an area where you know people could use your venue and would appreciate its availability. On the other hand, you want that the service you provide will be in sufficient demand. Sure Chinatown is a great place for a Chinese Restaurant, but is it a great place to open another one? In this project, we aim to identify promising neighborhoods for venues.

**Data to use**

We will use the clustered neighborhoods of Manhattan as an example. Previously we clustered the neighborhoods of Manhattan to identify similar neighborhoods. The customer base within one cluster might be very similar. For each cluster, we identify how common certain venues are. For each venue in a cluster we calculate the average rank how common it is. In a next step, we look at the ranks of the same venues in each neighborhood within the cluster. Based on the current rank of a venue in a neighborhood and the average rank of the same venue in the cluster we will define a score that expresses the need to have a new venue in this neighborhood. With this, we can identify new venue options for a neighborhood which will be in demand.