

Capstone Project - Kebab Connection

Introduction / Business Problem

You have just graduated college with a degree in theoretical philosophy – the world is your oyster. You're thinking of moving to Europe to live the sophisticated life – London, Paris, maybe Madrid? But then it hits you: Berlin! Art, culture, food, a phenomenal bar and club scene – you can't wait. But what are you going to do? You'll figure it out.

It is now a year later. You still live in the two-bedroom apartment that you share with four French guys. They are very nice, but you and Francois have to take turns sleeping on the couch. You tried, but you haven't really made a name for yourself in Berlin yet. People don't know who you are, and you're desperate to get out of this shit-hole apartment. But what are you going to do? Then it hits you: Everyone in Berlin is seemly either drunk, high or lost – and what do people need when they're one or all of those things? They need **food**! An idea creeps up on you that **no-one** has ever had before: **You're going to open a kebab restaurant in Berlin.**

OK, after some research, it seems that you're not the very first person to have the idea. But after walking around for a few days, you've noticed that there are still like maybe three, but at least two streets in Berlin that you haven't seen a kebab restaurant on. Your feet hurt. If only there was some way of figuring this out without leaving your apartment ...

So it's settled. All you have to do now: **find a neighborhood in Berlin that has lots of bars, is somewhat affordable to live in and has no or barely any kebab restaurants, and do it all without leaving the apartment.** „Piece of cake“, you're thinking to yourself. „How hard can it be to open up a kebab place?“

Data

To figure this out, you are going to be using the following:

Data	Used for	Source
A map of Berlin	Hanging on your wall and putting cool pins in	OpenStreetMap
A list of Berlin neighborhoods	Figuring out what neighborhoods there are in the first place	Wikipedia
Rent prices for Berlin	Where can you live off of 200€ a month? Anywhere? Oh God.	Statista
The location of all bars in Berlin	Where do people get drunk? Can I get it on this?	Foursquare
Location and maybe ratings of all kebab restaurants in Berlin	Is someone already feeding people kebab?	Foursquare

Map of Berlin & list of Berlin Neighborhoods

You quickly find a handy Wikipedia (https://de.wikipedia.org/wiki/Verwaltungsgliederung_Berlins) that lists all Berlin neighborhoods and corresponding boroughs. After scraping it and using the Google geocoder API to get the coordinates, you end up with a list that looks something like this:

	Neighborhood	Borough	Latitude	Longitude
0	Mitte	Mitte	52.519444	13.406667
1	Moabit	Mitte	52.530783	13.347176
2	Hansaviertel	Mitte	52.521312	13.343322
3	Tiergarten	Mitte	52.514534	13.350101
4	Wedding	Mitte	52.550483	13.351984

Putting these over an OpenStreetMap of Berlin, you get this:



Pretty snazzy.

Rent prices for Berlin

<https://de.statista.com/statistik/daten/studie/259905/umfrage/mietpreise-in-berlin-nach-bezirken/>
Because you're poor and can't afford buying the dataset, you decide to copy it by hand.

DOOOO THIS

Location of all bars & kebab places in Berlin

After doing a bit of research using the Foursquare API, you end up with 4346 Berlin venues in total. Is that enough? Is that too much? There's no real way of telling. You filter it down to kebab places and bars.

Foursquare found 72 kebab places.
Foursquare found 137 bars.

That seems right. There's no way that there could be more than 137 bars and 72 kebab places in all of Berlin. I mean, after all, Foursquare is an exhaustive compendium, right? You go to bed happy.