



The Restaurant Battle of Neighborhoods in Berlin

Final Capstone Project



Introduction

- Berlin is the capital and largest city of Germany.
- National and international migration into the city has a long history.
- Objective: To make a summary of the type of restaurant that a tourist can find in each neighborhood of Berlin.



Data

- Extracting information from Foursquare.
- Using boroughs Berlin overview from Wikipedia.



The screenshot shows the Wikipedia article titled "Boroughs and neighborhoods of Berlin". The page layout includes a sidebar on the left with navigation links such as "Main page", "Contents", "Current events", "Random article", "About Wikipedia", "Contact us", "Donate", "Contribute", "Help", "Learn to edit", "Community portal", "Recent changes", "Upload file", "Tools", "What links here", "Related changes", "Special pages", "Permanent link", "Page information", "Cite this page", "Wikidata item", "Print/export", "Download as PDF", "Printable version", "In other projects", "Wikimedia Commons", "Languages", and "العربية" and "Català". The main content area features a "Wiki Loves Earth" banner, the article title "Boroughs and neighborhoods of Berlin", and a sub-header "From Wikipedia, the free encyclopedia". The article text describes Berlin's administrative structure, mentioning its status as a city and one of Germany's federated states, and its division into twelve boroughs or districts (German: *Bezirke*, pronounced [bəˈtʰɪʁkə]), each with its own local government. It details the governance of each borough by a council (*Bezirksamt*) and a borough mayor (*Bezirksbürgermeister*), and mentions the Berlin Senate and the council of mayors (*Rat der Bürgermeister*). A map of Berlin's boroughs is included, showing the city's division into twelve colored regions: Mitte, Friedrichshagen-Kreuzberg, Prenzlauer Berg, Charlottenburg-Wilmersdorf, Spandau, Haidenpark, Lichtenberg, Marzahn-Hellersdorf, Tempelhof-Schöneberg, Köpenick, Steglitz-Zehlendorf, and Neukölln. Below the map, a table lists the twelve boroughs and their corresponding coats of arms. The "History" section is partially visible at the bottom, with a sub-header "Main article: Greater Berlin Act" and a paragraph stating that each borough is made up of several officially recognized subdistricts or neighborhoods (*Ortsteile* in German, sometimes called *quarters* in English). The page also includes a "Contents" table of contents and a "History" section with an "edit" link.

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Current events
Random article
About Wikipedia
Contact us
Donate
Contribute
Help
Learn to edit
Community portal
Recent changes
Upload file
Tools
What links here
Related changes
Special pages
Permanent link
Page information
Cite this page
Wikidata item
Print/export
Download as PDF
Printable version
In other projects
Wikimedia Commons
Languages
العربية
Català

Article Talk

Not logged in Talk Contributions Create account Log in

Read Edit View history Search Wikipedia

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Boroughs and neighborhoods of Berlin

From Wikipedia, the free encyclopedia

Berlin is both a city and one of Germany's federated states (city state). Since the 2001 administrative reform, it has been made up of twelve boroughs or districts (German: *Bezirke*, pronounced [bəˈtʰɪʁkə]), each with its own local government, though all boroughs are subject to Berlin's city and state government.

Each borough is governed by a council (*Bezirksamt*) with five councillors (*Bezirksstadträte*) and a borough mayor (*Bezirksbürgermeister*). The borough council is elected by the borough assembly (*Bezirksverordnetenversammlung*). The borough governments' power is limited, and subordinate to the Berlin Senate. The borough mayors form a council of mayors (*Rat der Bürgermeister*, led by the city's governing mayor), which advises the Senate.

Contents [hide]

- History
- Boroughs
- Administration
- Coats of arms
- Localities
- See also
- References
- External links

History

[edit]

Main article: *Greater Berlin Act*

Each borough is made up of several officially recognized subdistricts or neighborhoods (*Ortsteile* in German, sometimes called *quarters* in English). These neighborhoods

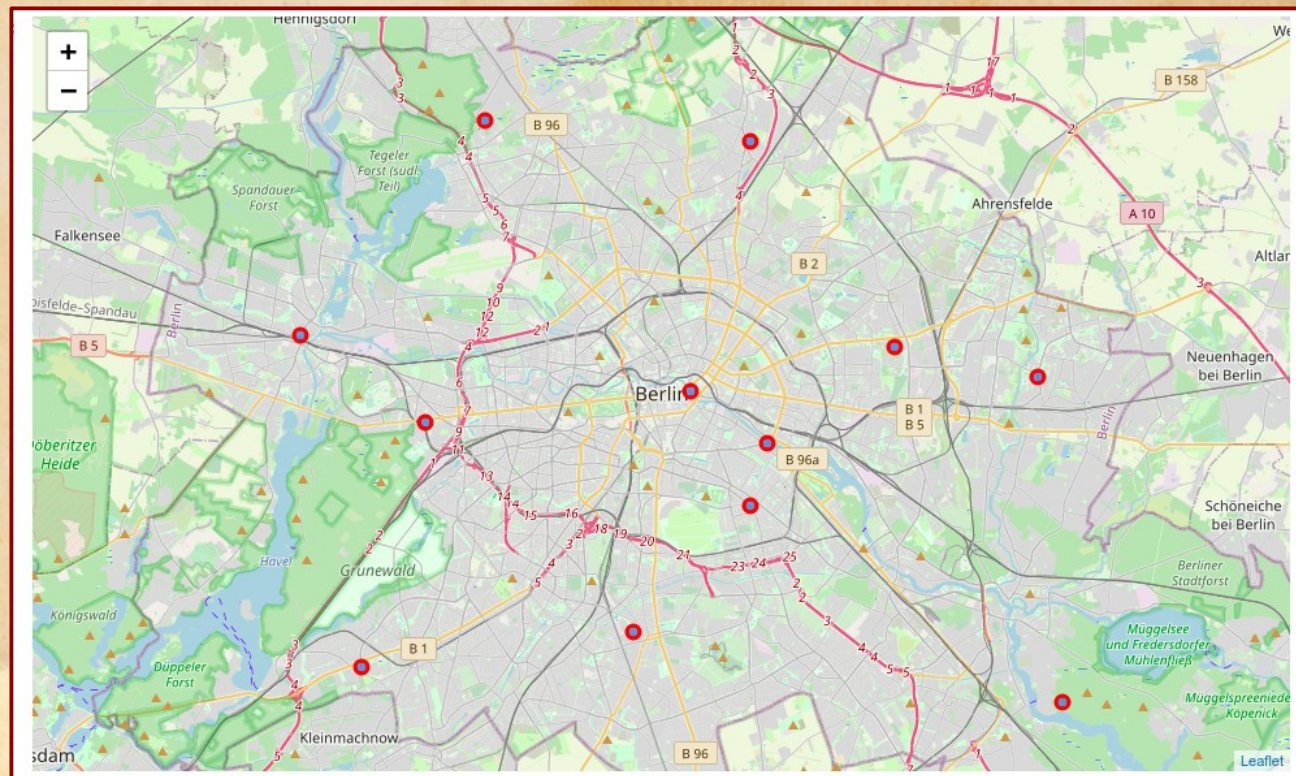
The boroughs and neighbourhoods of Berlin

The 12 Berlin *Bezirke*

I Mitte	II Friedrichshagen-Kreuzberg	III Prenzlauer Berg	IV Charlottenburg-Wilmersdorf
V Spandau	VI Haidenpark	VII Lichtenberg	VIII Marzahn-Hellersdorf
IX Tempelhof-Schöneberg	X Köpenick	XI Steglitz-Zehlendorf	XII Neukölln

Methodology

- Scrapping from Wiki.
- Nominatim function to add geospatial data.
- Creating a map with 12 boroughs on it.



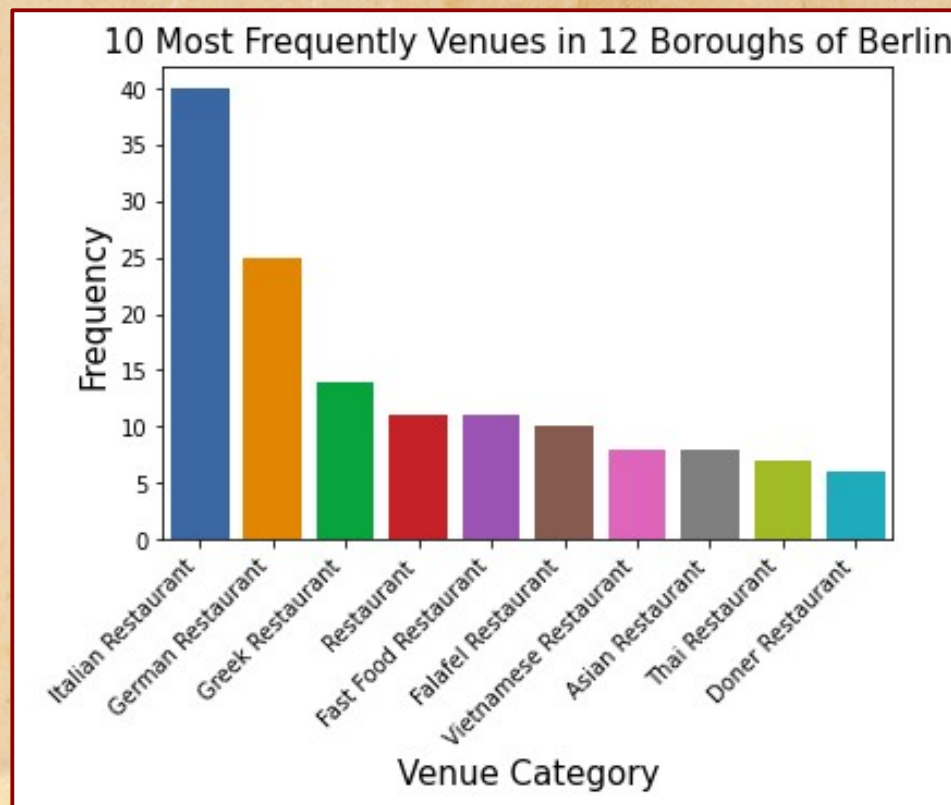
Methodology

- A quick view of the Mitte borough:

	name	categories	lat	lng
0	Designpanoptikum - surreales Museum für indust...	Museum	52.516941	13.406072
1	Bronzestatue "Heiliger St. Georg im Kampf mit ...	Outdoor Sculpture	52.516290	13.405558
2	Kuppelumgang Berliner Dom	Scenic Lookout	52.518966	13.400981
3	Nikolaiviertel	Neighborhood	52.516782	13.406453
4	Tigertörtchen	Cupcake Shop	52.517150	13.407926
5	Radisson Blu	Hotel	52.519561	13.402857
6	Lustgarten	Garden	52.518469	13.399454
7	Julchen Hoppe	German Restaurant	52.517397	13.404751
8	Nikolaikirchplatz	Plaza	52.516700	13.406839
9	Bonne Vie Café	Café	52.517287	13.407735
10	Altes Museum	History Museum	52.519537	13.398803
11	Buchhandlung Walther König	Bookstore	52.521301	13.400758
12	Neptunbrunnen	Fountain	52.519539	13.406925
13	The Greens	Café	52.515485	13.408987
14	Museum Ephraim-Palais	Museum	52.515856	13.407191
15	LUSH	Cosmetics Shop	52.519844	13.410409
16	Mutter Hoppe	German Restaurant	52.517614	13.405978

Methodology

- All Boroughs: 1081 venues & 221 restaurants
- Top 10 Most frequently restaurants:



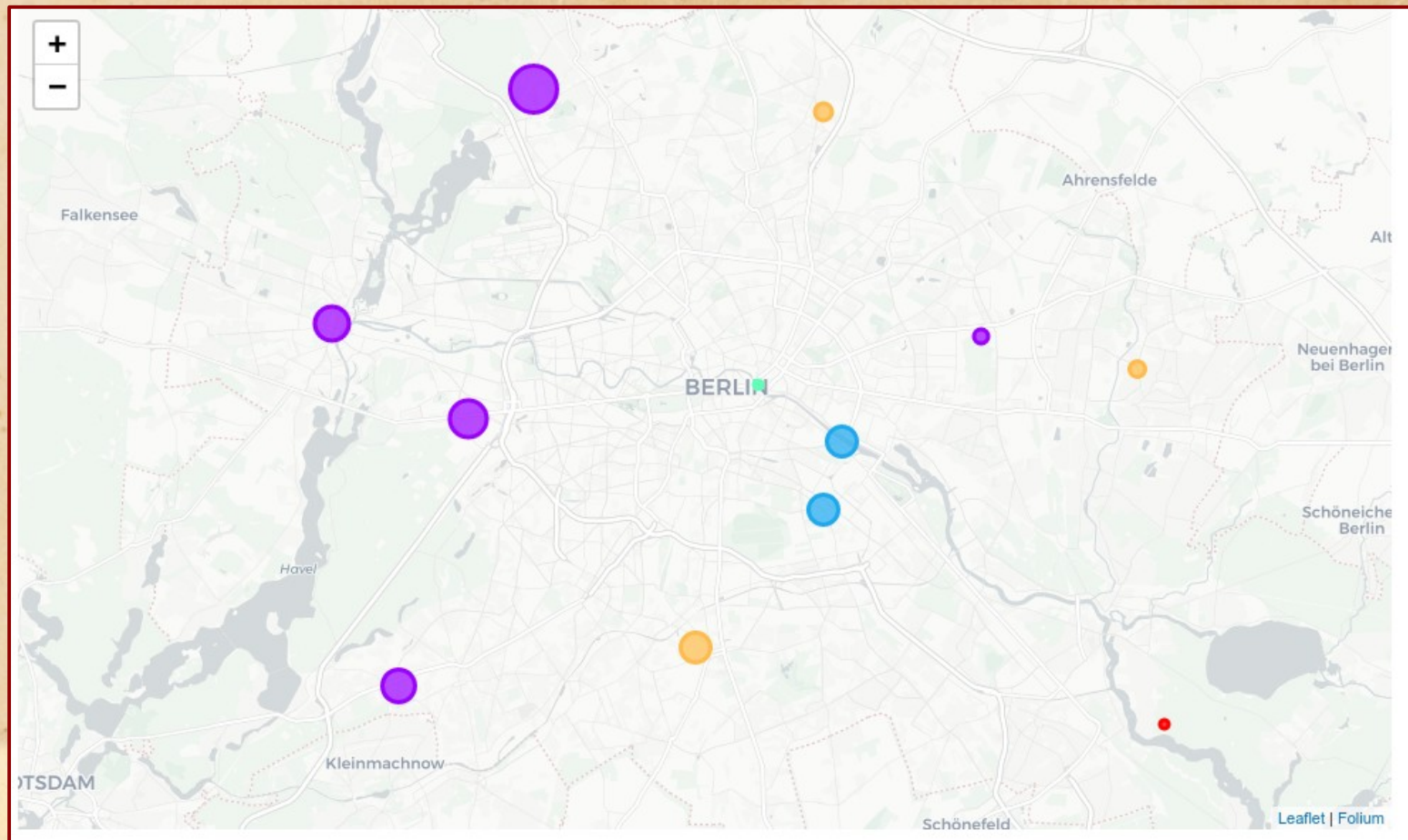
Methodology

- The most common restaurant venue types per borough:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Charlottenburg-Wilmersdorf	Italian Restaurant	German Restaurant	Vietnamese Restaurant	Asian Restaurant	Greek Restaurant	Indian Restaurant	Mediterranean Restaurant	Falafel Restaurant	Argentinian Restaurant	French Restaurant
1	Friedrichshain-Kreuzberg	Falafel Restaurant	Middle Eastern Restaurant	Thai Restaurant	African Restaurant	Mediterranean Restaurant	Lebanese Restaurant	Italian Restaurant	Spanish Restaurant	German Restaurant	French Restaurant
2	Lichtenberg Berlin	Vietnamese Restaurant	Italian Restaurant	Greek Restaurant	German Restaurant	Syrian Restaurant	Indian Restaurant	Ramen Restaurant	Middle Eastern Restaurant	Moroccan Restaurant	New American Restaurant
3	Marzahn-Hellersdorf	Italian Restaurant	Fast Food Restaurant	Greek Restaurant	Restaurant	Mexican Restaurant	Asian Restaurant	Thai Restaurant	Syrian Restaurant	Sushi Restaurant	Spanish Restaurant
4	Mitte	Seafood Restaurant	Vegetarian / Vegan Restaurant	Caucasian Restaurant	Italian Restaurant	Middle Eastern Restaurant	Ramen Restaurant	Restaurant	Mexican Restaurant	Moroccan Restaurant	New American Restaurant
5	Neukölln	African Restaurant	Falafel Restaurant	Vegetarian / Vegan Restaurant	Turkish Restaurant	Spanish Restaurant	Restaurant	Korean Restaurant	Dumpling Restaurant	Vietnamese Restaurant	Sushi Restaurant
6	Pankow	Greek Restaurant	Italian Restaurant	Restaurant	Asian Restaurant	Chinese Restaurant	Doner Restaurant	Thai Restaurant	Mexican Restaurant	German Restaurant	African Restaurant
7	Reinickendorf	Italian Restaurant	German Restaurant	Restaurant	Indian Restaurant	Seafood Restaurant	Greek Restaurant	Eastern European Restaurant	Argentinian Restaurant	Sushi Restaurant	New American Restaurant
8	Spandau	Italian Restaurant	German Restaurant	Fast Food Restaurant	Argentinian Restaurant	Turkish Restaurant	Restaurant	Vietnamese Restaurant	Halal Restaurant	Greek Restaurant	Mexican Restaurant
9	Steglitz-Zehlendorf	Italian Restaurant	German Restaurant	Asian Restaurant	Doner Restaurant	French Restaurant	Fast Food Restaurant	Restaurant	Greek Restaurant	Mexican Restaurant	Sushi Restaurant
10	Tempelhof-Schöneberg	Italian Restaurant	Asian Restaurant	Thai Restaurant	Chinese Restaurant	Doner Restaurant	Fast Food Restaurant	Korean Restaurant	Greek Restaurant	Restaurant	Middle Eastern Restaurant
11	Treptow-Köpenick	German Restaurant	Fast Food Restaurant	Sushi Restaurant	Greek Restaurant	Seafood Restaurant	Restaurant	Middle Eastern Restaurant	Moroccan Restaurant	New American Restaurant	Ramen Restaurant


Results

- We have assigned different cluster labels (0-4)
- Marking with a cluster-specific color on a map:



Results



- *Cluster 0:* **German** cluster
 - *Cluster 1:* **Italian and Vietnamese** cluster
 - *Cluster 2:* **Middle Eastern food and African** cluster
 - *Cluster 3:* **Seafood** cluster
 - *Cluster 4:* **Italian and Greek** cluster
- 

Conclusion

- Reasonable results
- Precision could be much better but this way is not bad





That's all !!!

