Real Estate Investment: Commercial Buildings, Cologne, Germany

for REI Commercial

by BJS Analytics

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Objective

- Invest in commercials buildings in Cologne, Germany

- Maximize profit by investing in a growing up-coming neighbourhood

- Define building type in agreement with needs and trends (e.g. medical centre, clothing shop, restaurant)
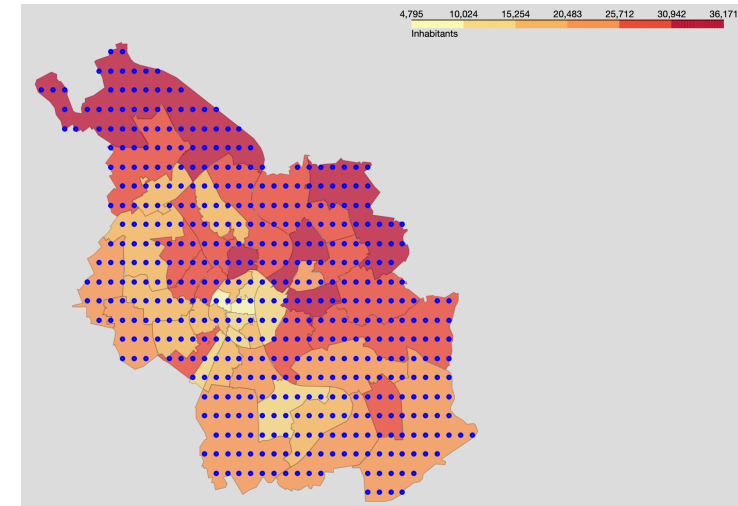
Data

- Geographical data divided by postal code areas
  (opendatasoft.com)

- Population number for each postal code area
  (suche-postleitzahl.org)

- Venues characteristics from Foursquare
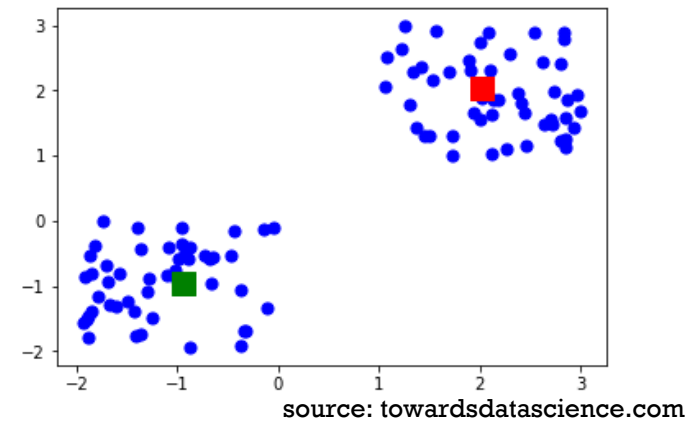 (Foursquare.com)

Methods

- **Foursquare queries**

  Equally spaced queries throughout the city

- **k-Means clustering**

  Clustering of city areas by type of venues
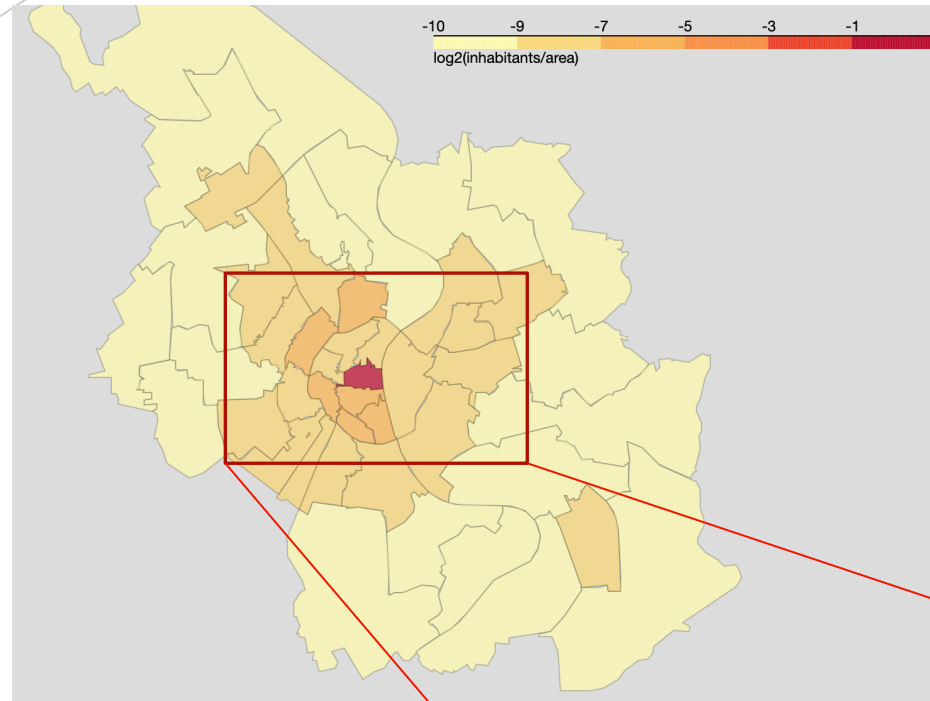

source: towardsdatascience.com
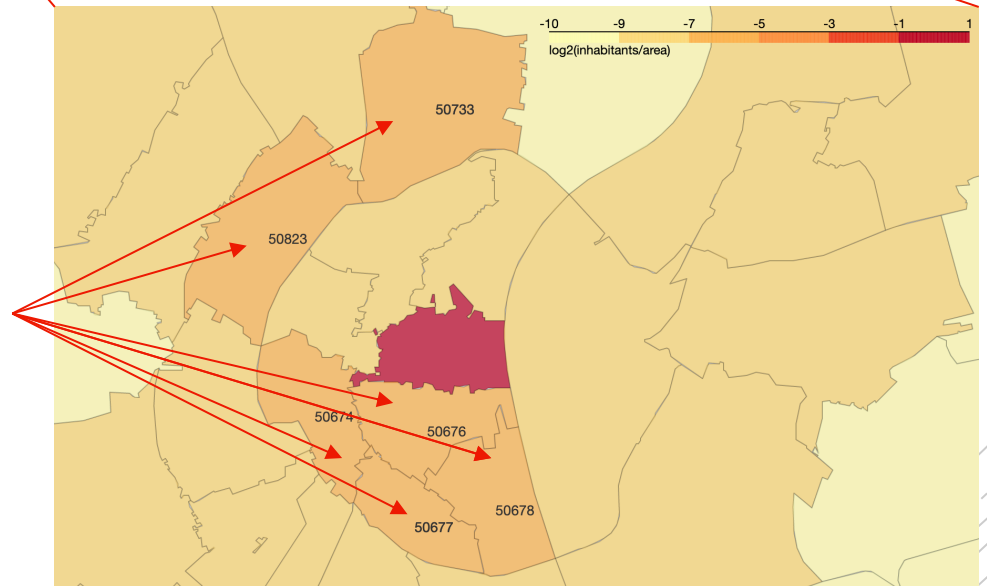
Methods

- Assumptions

  house pricing and socio-economics correlate with population and venues density

  neighbourhoods with a low population density are not attractive for investment in commercial buildings

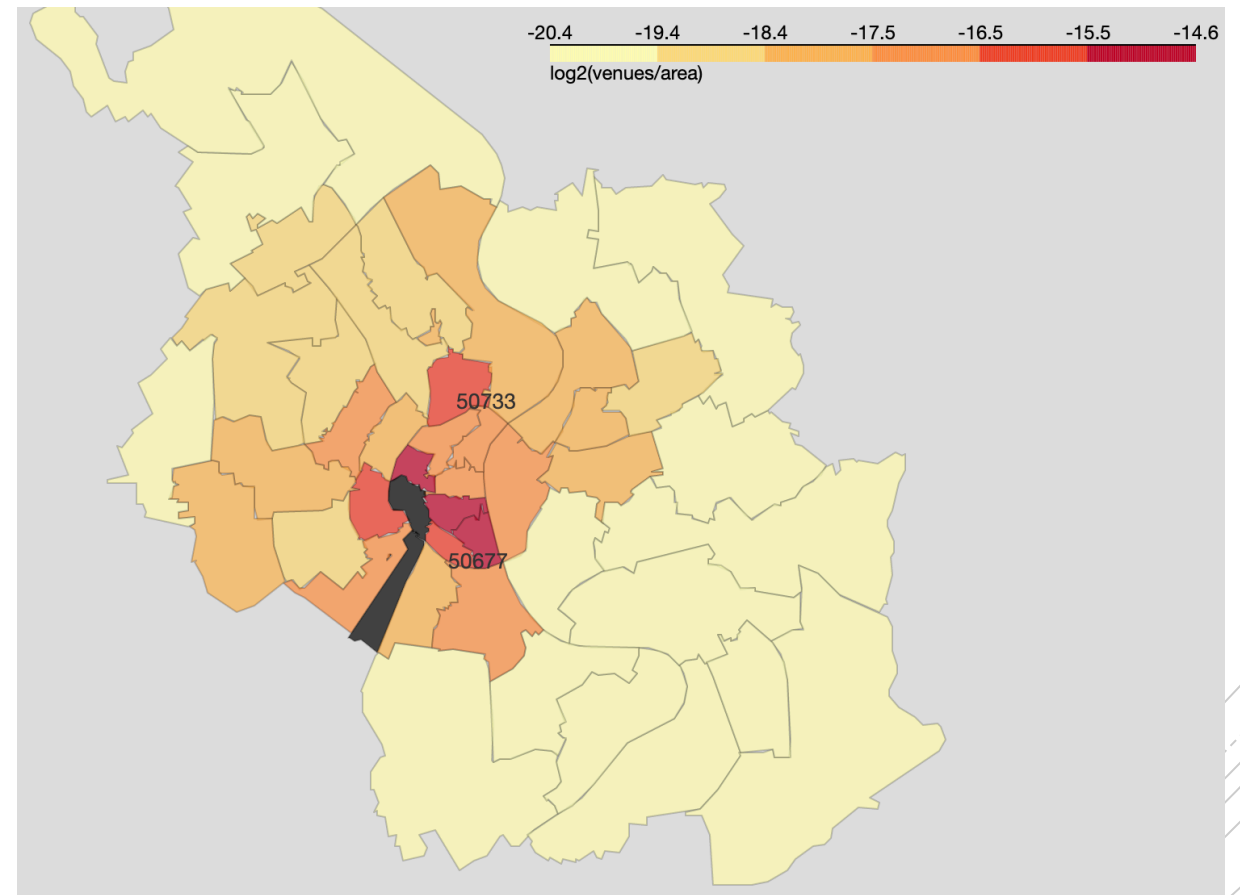Results: population analysis
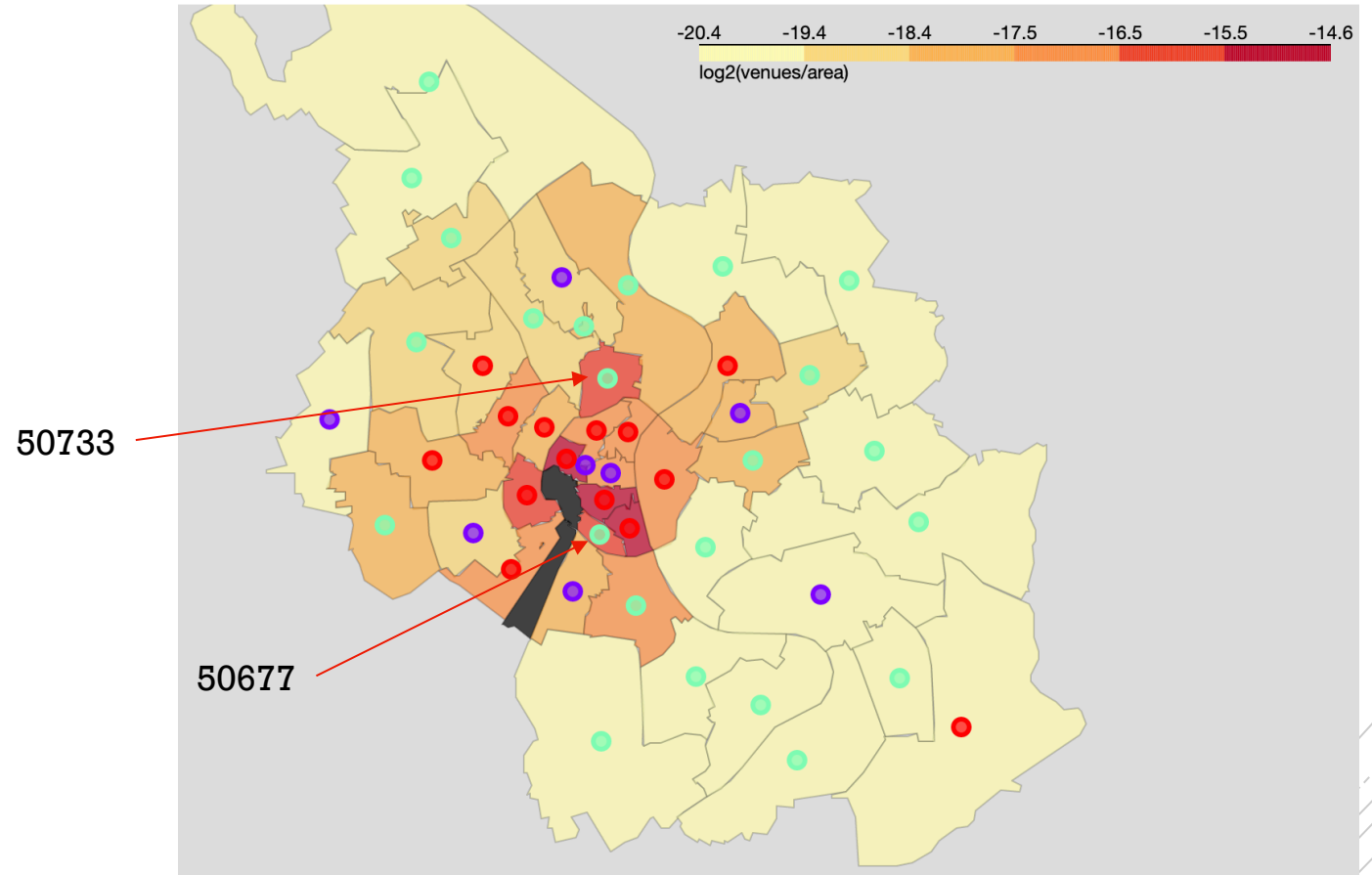
Upcoming neighbourhoods

Results:
venues analysis

- 50733 and 50677 emerge as upcoming neighbourhoods from population and venues analysis

- 50733 venues are geographically isolated from areas with high density of venues

Results: cluster analysis

- 50733 and 50677 show distinct venues from other trendy areas in the city (red)

- Nippes (50733) lacks hotels and has an overrepresentation of supermarkets

- Restaurants are trending in Cologne

Results: 50733 vs trendy neighbourhoods

	needed venues
Hotel	0.072
Bar	0.028
Italian Restaurant	0.026
Nightclub	0.022
Restaurant	0.022
German Restaurant	0.016
Pizza Place	0.016
Pub	0.013
Burger Joint	0.013
Spanish Restaurant	0.012
Snack Place	0.012
Trattoria/Osteria	0.012
Asian Restaurant	0.012
Austrian Restaurant	0.011
French Restaurant	0.010
Tapas Restaurant	0.009
Automotive Shop	0.009
Theater	0.009
Fast Food Restaurant	0.009
Water Park	0.008

increased need →

	existing venues
Supermarket	-0.105
Bakery	-0.057
Drugstore	-0.046
Doner Restaurant	-0.039
Martial Arts Dojo	-0.024
Thai Restaurant	-0.024
Kebab Restaurant	-0.024
Department Store	-0.024
Bank	-0.024
Farmers Market	-0.024
Cantonese Restaurant	-0.024
Plaza	-0.023
Organic Grocery	-0.022
Music Venue	-0.022
Bookstore	-0.022
Flea Market	-0.022
Modern European Restaurant	-0.021
Cocktail Bar	-0.019
Café	-0.019
Breakfast Spot	-0.018

overrepresented →

Conclusion

- Invest in **Nippes** (50733)

- Large investment in acquiring space for an **hotel**

- Smaller investments by acquiring space for **restaurants**

- Both recommendations are not susceptible to developments in online shopping

- More data on socio-economics as well as land and building costs will lower investment risk
    - e.g. hotels in low income neighbourhoods tend to have a small profit