

I amsterdata

What are the differences in
quality of life per district
in Amsterdam?

It depends!

Quality of life in Amsterdam

*“The standard of **health**, **comfort**, and **happiness**
experienced by an individual or group”*

Health

Healthcare facilities
Sport occasions
Suitable to grow old
Child friendly

Comfort

Average rent
Population density
Parking facilities
Start-ups

Happiness

Feeling of safety
Crime
Hospitality disturbance
Group interaction
Cultural facilities

“What is your opinion on the availability of sports facilities in your neighborhood?”

1 = not sufficient and 10 = very sufficient

Narrowing down the dataset to the question

- Select year 2019 for most recent representative data / filter variables
- Break down the results to answer our question in 2 levels:
 - Regions (Zuid, West, etc)
 - Neighbourhoods within each region

	region	neigh_code	neigh	year	population_density	avg_rent	parking_facilities	parking_facilities_bike	safe_day	safe_night	...
0	centrum	centrum	A Centrum	2019.0	13917.0	782.0	5.7	5.2	8.6	7.7	...
1	west	west	E West	2019.0	15446.0	674.0	6.1	5.3	8.4	7.5	...
2	n_west	n_west	F Nieuw-West	2019.0	4735.0	659.0	6.2	5.6	7.7	6.4	...
3	zuid	zuid	K Zuid	2019.0	9487.0	805.0	6.6	5.9	8.6	7.9	...
4	oost	oost	M Oost	2019.0	7952.0	708.0	6.6	5.9	8.6	7.5	...
5	noord	noord	N Noord	2019.0	2355.0	613.0	6.5	5.5	8.0	6.9	...
6	zuidoost	zuidoost	T Zuidoost	2019.0	4479.0	566.0	6.4	5.8	7.9	6.7	...
22	oost	DX16	DX16 IJburg, Zeeburgereiland	2019.0	5998.0	830.0	6.6	6.3	8.5	7.3	...
23	noord	DX17	DX17 Noord-West	2019.0	5487.0	605.0	6.0	5.3	8.0	6.9	...
24	noord	DX18	DX18 Oud-Noord	2019.0	4548.0	604.0	6.6	5.7	8.2	7.1	...
25	noord	DX19	DX19 Noord-Oost	2019.0	1059.0	639.0	6.9	5.6	7.8	6.6	...
26	zuidoost	DX20	DX20 Bijlmer-Centrum, Amstel III	2019.0	3184.0	513.0	6.0	5.7	7.6	6.2	...

Scoring

- Scores were calculated as percentage of the maximum observed value

Health
Healthcare facilities
Sport occasions
Suitable to grow old
Child friendly

Comfort
Average rent
Population density
Parking facilities
Entrepreneurship

Happiness
Feeling of safety
Crime
Hospitality disturbance
Group interaction
Cultural facilities

region	year	population_density
west	2019	1
centrum	2019	0,90100997
zuid	2019	0,614204325
oost	2019	0,514825845
n_west	2019	0,306551858
zuidoost	2019	0,289977988
noord	2019	0,152466658



e.g. at the level of regions

Which regions represents the highest and lowest “quality of life” score?

- The sum of all variables represents the overall quality of life across all regions

(* all variables have a similar weight in the final sum)

region	[variables]	year	SUM
centrum	...	2019	14,598599
west	...	2019	14,3864373
zuid	...	2019	14,3380154
oost	...	2019	14,1180814
zuidoost	...	2019	13,7865936
noord	...	2019	13,3229547
n_west	...	2019	13,1809259

Detecting the variables with high variety

Question:

What are the differences in quality of life per district in Amsterdam?

Health

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Start-ups

Happiness

Feeling of safety
Crime
Hospitality
Group interaction
Cultural facilities

Which variables show high variety between regions?

(max-min > 0.25)

region	year	population_density	avg_rent	start-ups	hospitality_per_1000	cultural_facilities
west	2019	1	0,971429	0,734265734	0,29166667	0,87179487
centrum	2019	0,90100997	0,837267	0,573426573	1	1
zuid	2019	0,614204325	1	0,636363636	0,29166667	0,87179487
oost	2019	0,514825845	0,8795031	0,692307692	0,20833333	0,79487179
n_west	2019	0,306551858	0,7031055	1	0,125	0,73076923
zuidoost	2019	0,289977988	0,7614906	1	0,125	0,74358974
noord	2019	0,152466658	0,8186335	0,769230769	0,16666667	0,70512821

Detecting the variables with high variety

Which variables show high variety between neighbourhoods? (max-min > 0.5)

region	population_density	population_de nsity	region	neigh	avg_rent	region	neigh	Start-ups
zuidoost	T93 Bijlmer-Centrum (D,F,H)	1	zuidoost	T93 Bijlmer-Centrum (D,F,H)	1	zuidoost	T93 Bijlmer-Centrum (D,F,H)	1
oost	M31 Indische Buurt West	1	west	DY06 De Baarsjes	1	zuidoost	DY26 Bijlmer-Oost	1
centrum	A06 Jordaan	1	zuid	DY12 Oud-Zuid-West	1	oost	M57 Betondorp	1
west	E19 Van Lennepbuurt	1	centrum	DY02 Centrum-Oost	1	zuid	K48 Stadionbuurt	1
noord	N68 Waterlandpleinbuurt	1	noord	DX18 Oud-Noord	1	west	DY03 Westerpark	1
zuid	K25 Nieuwe Pijp	1	zuid	K91 Buitenveldert-Oost	1	oost	M35 IJburg West	1
n_west	F82 Osdorp-Midden	1	zuid	K23 Zuidas	1	west	DX03 Westerpark	1
west	E14 Staatsliedenbuurt	0,98761841	west	E19 Van Lennepbuurt	0,99170813	noord	N68 Waterlandpleinbuurt	0,99421965
zuid	DY15 De Pijp	0,98097252	noord	N68 Waterlandpleinbuurt	0,99170813	oost	M31 Indische Buurt West	0,9787234
zuid	K24 Oude Pijp	0,97479584	zuid	K25 Nieuwe Pijp	0,99170813	west	DY06 De Baarsjes	0,97109827
...
zuid	DY14 Buitenveldert/Zuidas	0,16303942	zuid	K45 Schinkelbuurt	0,60522152	noord	N71 Noordelijke IJ-oever West	0,5147929
zuid	DX11 Buitenveldert, Zuidas	0,16303942	noord	DX19 Noord-Oost	0,5982242	noord	N70 Banne Buiksloot	0,49206349
oost	DX15 Watergraafsmeer	0,16021199	n_west	F84 Middelveldsche Akerpolder	0,59572785	zuidoost	DY25 Bijlmer-Centrum	0,47701149
oost	DY20 Watergraafsmeer	0,16021199	n_west	F81 Osdorp-Oost	0,59098101	west	E41 Van Galenbuurt	0,47647059
oost	M57 Betondorp	0,11370122	zuidoost	DX20 Bijlmer-Centrum, Amstel III	0,57986111	centrum	A05 Haarlemmerbuurt	0,47647059
noord	DY24 Noord Oost	0,11208721	noord	N60 Volewijck	0,57674051	zuid	K52 Scheldebuurt	0,47647059
noord	DX19 Noord-Oost	0,11208721	zuid	K52 Scheldebuurt	0,55933544	centrum	A08 Weesperbuurt/Plantage	0,44827586
zuid	K23 Zuidas	0,07731211	n_west	DY11 Slotervaart	0,54746835	west	DY05 Oud-West	0,41954023
oost	M58 Omval/Overamstel	0,06385502	west	DX03 Westerpark	0,54667722	zuidoost	DY27 Gaasperdam/Driemond	0,41860465
oost	M34 Zeeburgereiland/Nieuwe diep	0,05651707	n_west	DY09 Slotervaart	0,4778481	west	E15 Centrale Markt	0,39053254

Detecting the variables with high variety

Which variables show high variety between neighbourhoods?

region	neigh	hospitality_per_1000
west	DX03 Westerpark	1
zuidoost	T94 Bijlmer-Oost (E,G,K)	1
oost	M58 Omval/Overamstel	1
centrum	A09 Oostelijke Eilanden/Kadijken	1
zuid	DX11 Buitenveldert, Zuidas	1
oost	DY18 Indische Buurt	1
n_west	F89 Slotervaart Zuid	1
noord	N66 Oostzaneerwerf	1
oost	DY21 IJburg/Zeeburgereiland	1
west	E21 Overtoomse Sluis	1
...
oost	DY20 Watergraafsmeer	0,16666667
n_west	F82 Osdorp-Midden	0,16666667
oost	M33 Oostelijk Havengebied	0,16666667
centrum	DY02 Centrum-Oost	0,15730337
n_west	F77 Slotermeer-Zuidwest	0,15730337
n_west	F84 Middelveldsche Akerpolder	0,15730337
noord	N61 IJplein/Vogelbuurt	0,1011236
n_west	F88 Sloter/Riekerpolder	0,08333333
n_west	F76 Slotermeer-Noordoost	0,07142857
n_west	DX06 Geuzenveld, Slotermeer, Sloterdijken	0,05617978

region	neigh	cultural_facilities
n_west	F89 Slotervaart Zuid	1
oost	DY21 IJburg/Zeeburgereiland	1
west	E21 Overtoomse Sluis	1
oost	M57 Betondorp	1
zuid	K54 Rijnbuurt	1
noord	N65 Tuindorp Oostzaan	1
oost	DY19 Oostelijk Havengebied	1
zuid	DY13 Oud-Zuid-Oost	1
oost	M30 Transvaalbuurt	1
noord	DY23 Oud Noord	1
...
noord	DX18 Oud-Noord	0,70114943
noord	N71 Noordelijke IJ-oeveren West	0,70114943
noord	N70 Banne Buiksloot	0,70114943
zuid	K91 Buitenveldert-Oost	0,68965517
oost	M32 Indische Buurt Oost	0,65517241
centrum	DY02 Centrum-Oost	0,64383562
n_west	F77 Slotermeer-Zuidwest	0,64383562
noord	N61 IJplein/Vogelbuurt	0,64383562
n_west	DX06 Geuzenveld, Slotermeer, Sloterdijken	0,64383562
n_west	F76 Slotermeer-Noordoost	0,47945205

region	neigh	child_friendly
n_west	F89 Slotervaart Zuid	1
zuidoost	DY25 Bijlmer-Centrum	1
zuid	K23 Zuidas	1
n_west	DY11 Slotervaart	1
west	DX05 Oud-West, De Baarsjes	1
oost	M31 Indische Buurt West	1
oost	DX15 Watergraafsmeer	1
west	DX03 Westerpark	0,98666667
zuid	K45 Schinkelbuurt	0,98666667
west	E40 Geuzenbuurt	0,97530864
...
n_west	F82 Osdorp-Midden	0,75
west	E15 Centrale Markt	0,7375
centrum	A01 Burgwallen-Nieuwe Zijde	0,7375
centrum	A04 Nieuwmarkt/Lastage	0,7375
oost	M33 Oostelijk Havengebied	0,7125
centrum	A07 De Weteringschans	0,7125
n_west	DY08 Geuzenveld	0,7
zuidoost	T93 Bijlmer-Centrum (D,F,H)	0,7
centrum	DY02 Centrum-Oost	0,55714286
noord	N61 IJplein/Vogelbuurt	0,45714286

Future perspectives

We have a massive dataset and the necessary tools to answer very specific questions about the regions and neighbourhoods of Amsterdam.

Why not make it available to the public, help people find their ideal home?

Collaboration with big tech companies to create an app and help people locate their ideal region to move for a short or long period?

(Overall quality of life will be defined by user preference)



Google



iOS

Selecting: Best Districts Sub Districts

**.....How to Pick and Move to the Best
Neighborhood for You and Your Family?**

.....Asking the right questions?

Selecting....

**This version helps you to see the detail
reports on districts and subdistricts**

**Remember: Data year 2019 for Find your
Ideal Neighborhood 2020**

Main Menu

.... Ranking

....Min and Max

....Comparing

Districts

Sub Districts

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GEMEENTE AMSTERDAM

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Main Menu

XXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX

~~~~~ 1. DTSTRTCTS ~~~~~ 2. SUB DTSTRTCTS ~~~~~

# Selecting Districts

# Selecting the variables

# Selecting Districts

## Example: Average Rent

```
.....WELCOME TO DISTRICTS OF AMSTERDAM.....  
Select here:  
Press 1. Avarage Rent *Press 2. Population Density ** 3. Parking Facilities  
press 4. Sport and Cultural facilities ** Press 5. Nuisance crime *Press 6. For Care Facilities  
Which variable you want to see detail?1
```

```
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX GEMENTE AMSTERDAM XXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX Report XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
.....XXXXXXXXXXXXXXXXXXXXXXXXXXXX.....  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
****1. AVERAGE RENT****
```

| Region  | Average_Rent | mean   | Rank_Region |
|---------|--------------|--------|-------------|
| centrum | 783.00       | 783.00 | 2.0         |
| n_west  | 674.10       | 674.10 | 5.0         |
| noord   | 615.75       | 615.75 | 6.0         |
| oost    | 707.82       | 707.82 | 3.0         |
| west    | 682.22       | 682.22 | 4.0         |
| zuid    | 819.09       | 819.09 | 1.0         |
| oost    | 569.27       | 569.27 | 7.0         |

# Selecting Sub Districts

# Selecting Variables

# Selecting Sub Districts

# Selecting District

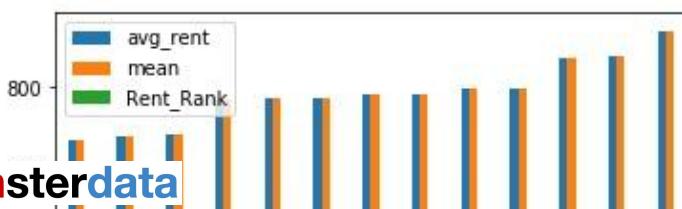
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Overall and Sub region Ranking in every variable

|    | region  | avg_rent |          | Location                     | mean | Rent_Rank |
|----|---------|----------|----------|------------------------------|------|-----------|
| 0  | centrum | 676      | A09**A09 | Oostelijke Eilanden/Kadijken | 676  | 11.0      |
| 1  | centrum | 683      |          | A06**A06 Jordaan             | 683  | 10.0      |
| 2  | centrum | 689      | A08**A08 | Weesperbuurt/Plantage        | 689  | 9.0       |
| 3  | centrum | 767      |          | A05**A05 Haarlemmerbuurt     | 767  | 8.0       |
| 4  | centrum | 771      |          | DX01**DX01 Centrum-West      | 771  | 7.0       |
| 5  | centrum | 771      |          | DY01**DY01 Centrum-West      | 771  | 7.0       |
| 6  | centrum | 781      | A00**A00 | Burgwallen-Oude Zijde        | 781  | 6.0       |
| 7  | centrum | 782      |          | centrum**A Centrum           | 782  | 5.0       |
| 8  | centrum | 796      |          | DX02**DX02 Centrum-Oost      | 796  | 4.0       |
| 9  | centrum | 796      |          | DY02**DY02 Centrum-Oost      | 796  | 4.0       |
| 10 | centrum | 865      | A04**A04 | Nieuwmarkt/Lastage           | 865  | 3.0       |
| 11 | centrum | 872      |          | A07**A07 De Weteringschans   | 872  | 2.0       |
| 12 | centrum | 930      | A01**A01 | Burgwallen-Nieuwe Zijde      | 930  | 1.0       |

This is the centrum region with sub districts:

AxesSubplot(0.125,0.125;0.775x0.755)



## Tips:

**Yellow: Variables with the preferable areas according to rank.**

**Example : Avg\_rent region Noord, zuidoost, nwest is good to look! They have cheapest values!**

|          | Average_Rent | population_density | Parking  | Enterpreneurs | safe_day_night | sport_cultural | nuisance_crime | group_interaction | care_facilities |
|----------|--------------|--------------------|----------|---------------|----------------|----------------|----------------|-------------------|-----------------|
| Region   |              |                    |          |               |                |                |                |                   |                 |
| west     |              |                    | 2.000000 |               |                |                |                |                   |                 |
| centrum  |              |                    | 1.000000 | 1.000000      |                |                | 1.000000       |                   | 3.000000        |
| noord    | 2.000000     | 1.000000           |          |               | 3.000000       | 1.000000       | 3.000000       | 2.000000          | 2.000000        |
| zuid     |              |                    |          | 2.000000      |                |                |                |                   |                 |
| zuidoost | 1.000000     | 2.000000           |          |               | 2.000000       | 3.000000       |                | 3.000000          |                 |
| oost     |              |                    |          | 3.000000      |                |                |                |                   |                 |
| n_west   | 3.000000     | 3.000000           | 3.000000 |               | 1.000000       | 2.000000       | 2.000000       | 1.000000          | 1.000000        |

# Thank you!

Any questions?