

Web scraper of Slovak real estate websites and analysis of results

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About the project:

This project is a web scraper of Slovakia's top three most popular real estate websites. More specifically, we have collected data about apartments for sale in Bratislava. The goal of this project was to get insights about the current real estate market in Bratislava and answer these questions:

- what is the average price for an apartment in Bratislava?
- what is the average price for m² in an apartment in Bratislava?
- what is the average price for an apartment in Bratislava per address?
- what is the number of offers per address?
- are there any duplicate apartments on these three websites with different prices?

(Data for all three websites have been collected on 29.1.2024, so answers to these questions can be different at the time of reading this document, as well as offers, because of constant changes in the market. We have collected data only about apartments with all required information. If some piece of data was missing, for example price, we did not take this apartment into consideration.)

Used websites for data collection:

<https://www.nehnutenosti.sk>

<https://www.topreality.sk>

<https://www.reality.sk>

Collected data:

- link of the offer
- title of the offer
- address
- price
- price for m²
- total area

Files:

- *data-nehnutenostisk.csv* – data from nehnutenosti.sk (for analysis of prices and number of offers)
- *all_websites.csv* – data from all three websites
- *duplicate_apartments.csv* – apartments from all three websites with the same title, total area and address but different price
- *offers_per_location.csv* – number of offers per address
- *avg_price_per_location.csv* – average price per address

Results of the analysis:

What is the average price for an apartment in Bratislava?

The average price for an apartment in Bratislava is 256 443,6€.

What is the average price for m² in an apartment in Bratislava?

The average price for a m2 in an apartment in Bratislava is 3829,47€.

What is the average price per address for an apartment in Bratislava, and what is the number of offers per address?

Data answering these questions are in directory *data*.

Are there any duplicate apartments on these three websites with different prices?

Answering this question is more challenging than it seems. We have attempted to find duplicate apartments using the data given to us by these websites: the offer's title, the apartment's total area, and the address. We have operated under the assumption that identical apartments have the same title of the offer on different websites. This assumption proved to be true for the majority of apartments. We have discovered that some apartments have different prices on website reality.sk because of the provision that is displayed next to the regular price(usually a few hundred euros).

However, some apartments on the same website have the same title, address, and total area, but they have different prices (usually a few thousand euros). After closer inspection of these apartments, we have concluded that these apartments can be in the same building but on different floors, in different cardinal directions, or in different building but in the same complex of apartment buildings.

These findings can be beneficial for someone looking for a home because they show differences in prices, which can be crucial for many people.