Programming with R

Tokyo Real Estate

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Second Part

Mini Report For the Final Project

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Short Introduction

The dataset was downloaded from the website "Kaggle", the original version of the dataset is available on the website of Ministry of Land, Infrastructure, Transport and Tourism of Japan. In addition to that, I had to download a geospatial database (.geojson) from "gadm.org" for the city of Tokyo, and do some manipulations with it on "geojson.io" – assigning municipality names and quality check.

The dataset contain many different data entries, starting from 2005 being the earliest, and 2019, being the oldest data entry. However, the dataset was created at the end of 2023.

Variables and its types of this dataset are the following: Region – character, Prefecture – character, Municipality – character, DistrictName – character, TradePrice – numeric, Area – integer, Year – integer.

Application

I want this application to be helpful to people who are interested in moving to / buying real estate in the Tokyo Area. This application can be of great help for them to choose different options based on their budget constraints. A lot of websites proposing real estate options just list available accommodations, without any further information on the place, and seeing one overprices / underprices real estate option can have consequences if bought – overpriced in the neighborhood with expectations not meeting reality, or underpriced in an expensive neighborhood – hard to keep up with the cost of living, but hey, looks like a good deal to re-sale or rent/investment. That is where the application comes to help.

There are several available functions and options in the application:

- Choose between regions – commercial, industrial, potential residential, residential areas
- Choose the year period – from 2005 to 2019
- Choose your preferred municipalities
- Choose your preferred price and area
- Choose your preferred year for the latest prices

The application is interactive and user-friendly, by that we mean the following:

- Many graphs for illustration purposes – average price and area by year – "Real Estate Statistics" page of the application

- The left part will be "Settings" – easy to use and navigate filters and parameters – where people can set what they want and need, right part will be about visuals – graphs and more. To access – click on the "Click for Inputs" button
- A data table, reflecting your choices, which is also interactive – you can sort the values by names or by numbers descending and ascending – "Property List" page of application
- A list of interactive KPIs – they will change based on your choice – "Short Summary" page of application
- Finally, 3 maps – the only non-interactive part – meaning that they show the overall situation of the Tokyo real estate market for the past 15 years. The maps are – average size, average area, average year of listings – all per municipality – "Tokyo Map" page of application.

There are also detailed instructions inside the application itself – under the "How to Use" page of application – it is also the first thing a user will see when launching the application.

The application is also deployed, check it out here - https://belkinmix.shinyapps.io/Tokyo/

Thank you for your time reading this report ! I hope you enjoyed my application !