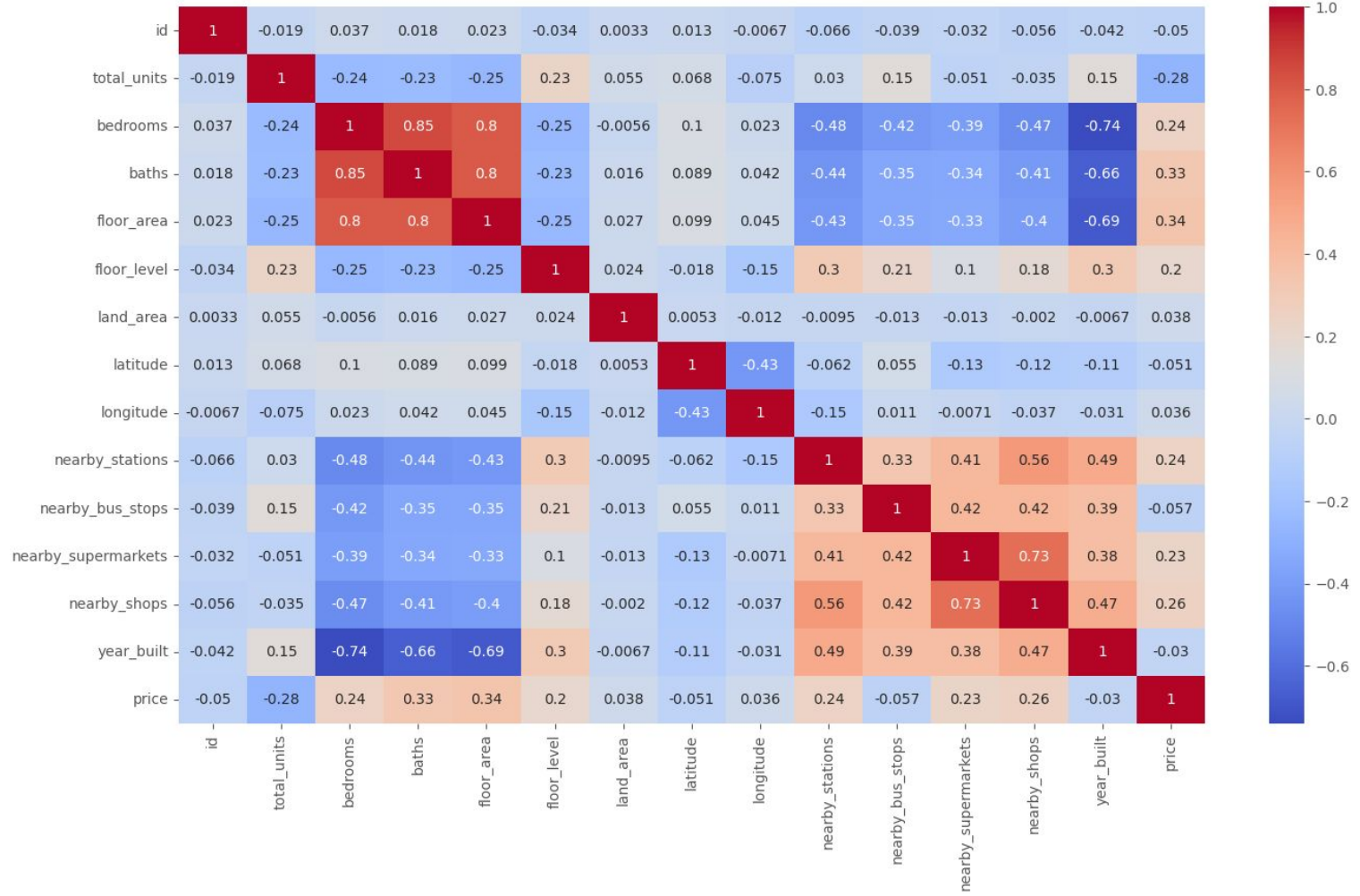
Project 2

Bangkok Housing Price

Thought Process

At first with individual perspective I try to calculate `price_per_sqm` to leverage unit since `land_area` and `floor_area` is different weight in remote province

But found out that in this data set `land_area` didn’t correlate that much may be location range isn’t different too much


id 1 -0.019 0.037 0.018 0.023 -0.034 0.0033 0.013 -0.0067 -0.066 -0.039 -0.032 -0.056 -0.042 -0.05
total_units -0.019 1 -0.24 -0.23 -0.25 0.23 0.055 0.068 -0.075 0.03 0.15 -0.051 -0.035 0.15 -0.28
bedrooms 0.037 -0.24 1 0.85 0.8 -0.25 -0.0056 0.1 0.023 -0.48 -0.42 -0.39 -0.47 -0.74 0.24
baths 0.018 -0.23 0.85 1 0.8 -0.23 0.016 0.089 0.042 -0.44 -0.35 -0.34 -0.41 -0.66 0.33
floor_area 0.023 -0.25 0.8 0.8 1 -0.25 0.027 0.099 0.045 -0.43 -0.35 -0.33 -0.4 -0.69 0.34
floor_level -0.034 0.23 -0.25 -0.23 -0.25 1 0.024 -0.018 -0.15 0.3 0.21 0.1 0.18 0.3 0.2
land_area 0.0033 0.055 -0.0056 0.016 0.027 0.024 1 0.0053 -0.012 -0.0095 -0.013 -0.013 -0.002 -0.0067 0.038
latitude 0.013 0.068 0.1 0.089 0.099 -0.018 0.0053 1 -0.43 -0.062 0.055 -0.13 -0.12 -0.11 -0.051
longitude -0.0067 -0.075 0.023 0.042 0.045 -0.15 -0.012 -0.43 1 -0.15 0.011 -0.0071 -0.037 -0.031 0.036
nearby_stations -0.066 0.03 -0.48 -0.44 -0.43 0.3 -0.0095 -0.062 -0.15 1 0.33 0.41 0.56 0.49 0.24
nearby_bus_stops -0.039 0.15 -0.42 -0.35 -0.35 0.21 -0.013 0.055 0.011 0.33 1 0.42 0.42 0.39 -0.057
nearby_supermarkets -0.032 -0.051 -0.39 -0.34 -0.33 0.1 -0.013 -0.13 -0.0071 0.41 0.42 1 0.73 0.38 0.23
nearby_shops -0.056 -0.035 -0.47 -0.41 -0.4 0.18 -0.002 -0.12 -0.037 0.56 0.42 0.73 1 0.47 0.26
year_built -0.042 0.15 -0.74 -0.66 -0.69 0.3 -0.0067 -0.11 -0.031 0.49 0.39 0.38 0.47 1 -0.03
price -0.05 -0.28 0.24 0.33 0.34 0.2 0.038 -0.051 0.036 0.24 -0.057 0.23 0.26 -0.03 1
id
total_units
bedrooms
baths
floor_area
floor_level
land_area
latitude
longitude
nearby_stations
nearby_bus_stops
nearby_supermarkets
nearby_shops
year_built
price
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6

Thought Process

So I try with EDA process

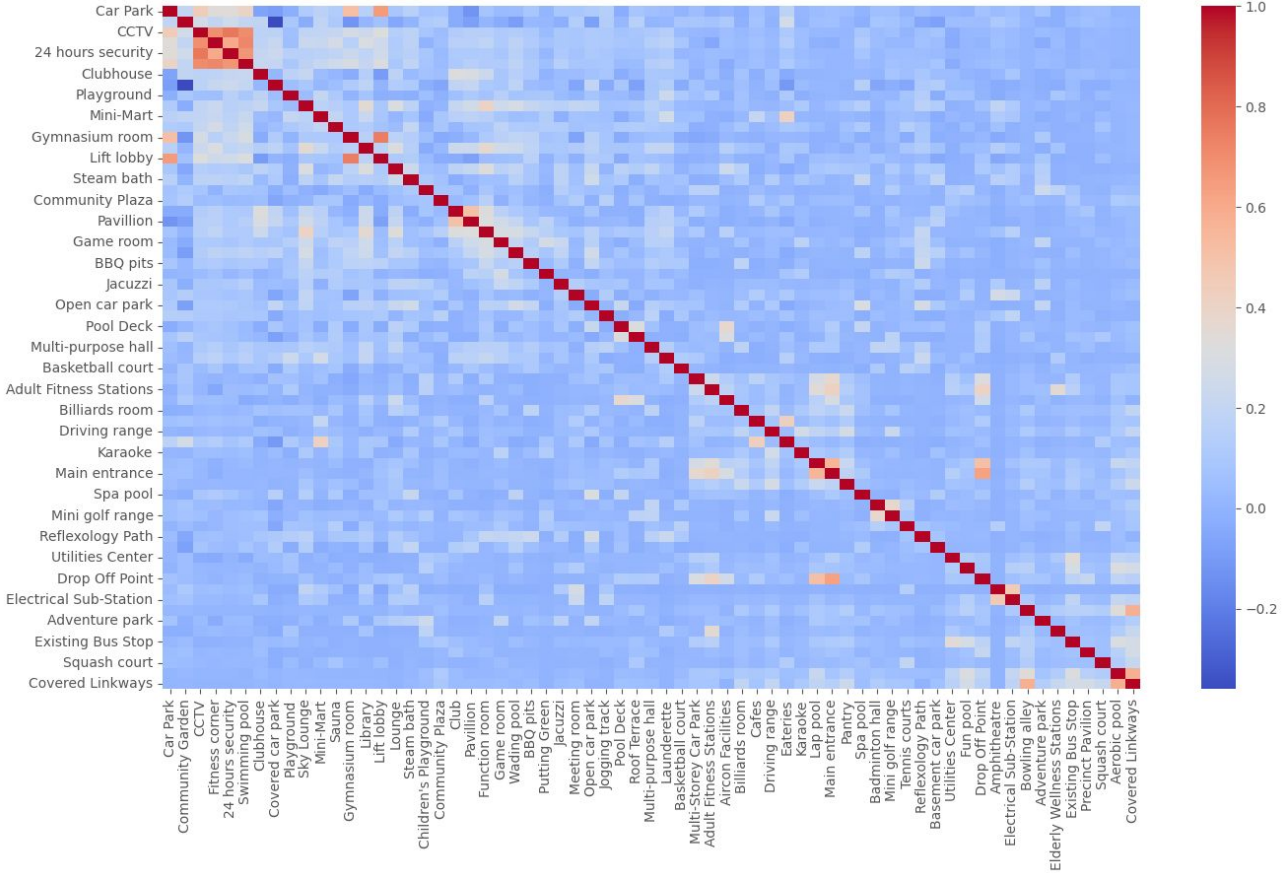
Scanning for `nil` value and clean its up with `mean` value (after use individual expectation to only 1 floor for Detach House etc..)

Classified `property_type` and `province` also `district` with `get_dummies`

Thought Process

Extract `facilities`

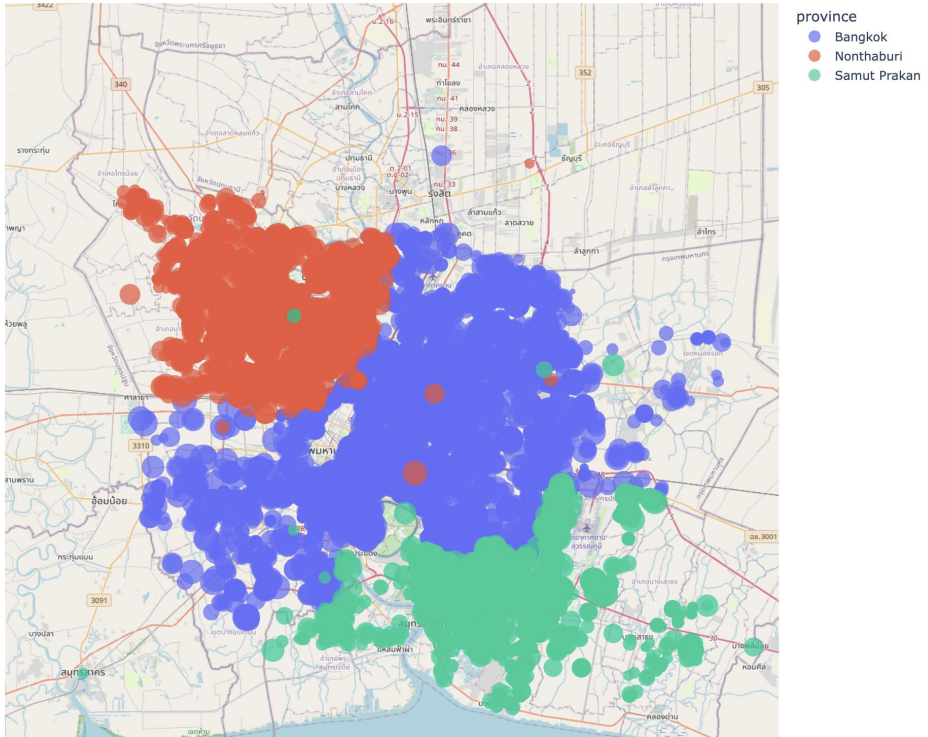
into column and modeling



Thought Process

After all of normal process of EDA Kaggle score is better than worst benchmark model

After seeing the map



Thought Process

I try experiment (with some guidance from Nozomi)

As hypothesis that `Siam` is the most expensive housing price in Bangkok

So .. as Spider Man far From Home I code

Experiment How Far From Siam

create function to get distant from Siam (hypothesis that Siam is Expensive price for Accomodation)

```python
def distant_to_siam(lat, long):
    # https://maps.app.goo.gl/E954o1rAdTKxDHyG6
    siam_lat = 13.7465
    siam_long = 100.532
    return np.sqrt((lat - siam_lat)**2 + (long - siam_long)**2)
```

16] ✓ 0.0s Python

Thought Process

And got a luck that RMSE score is better

4	**fake-or-dead**		1,183,779	5	9s

Your Best Entry!
Your most recent submission scored 1,183,779, which is the same as your previous score. Keep trying!

82%

Better that Dummy Regression

-14.41%

From the Best Model

Thank you