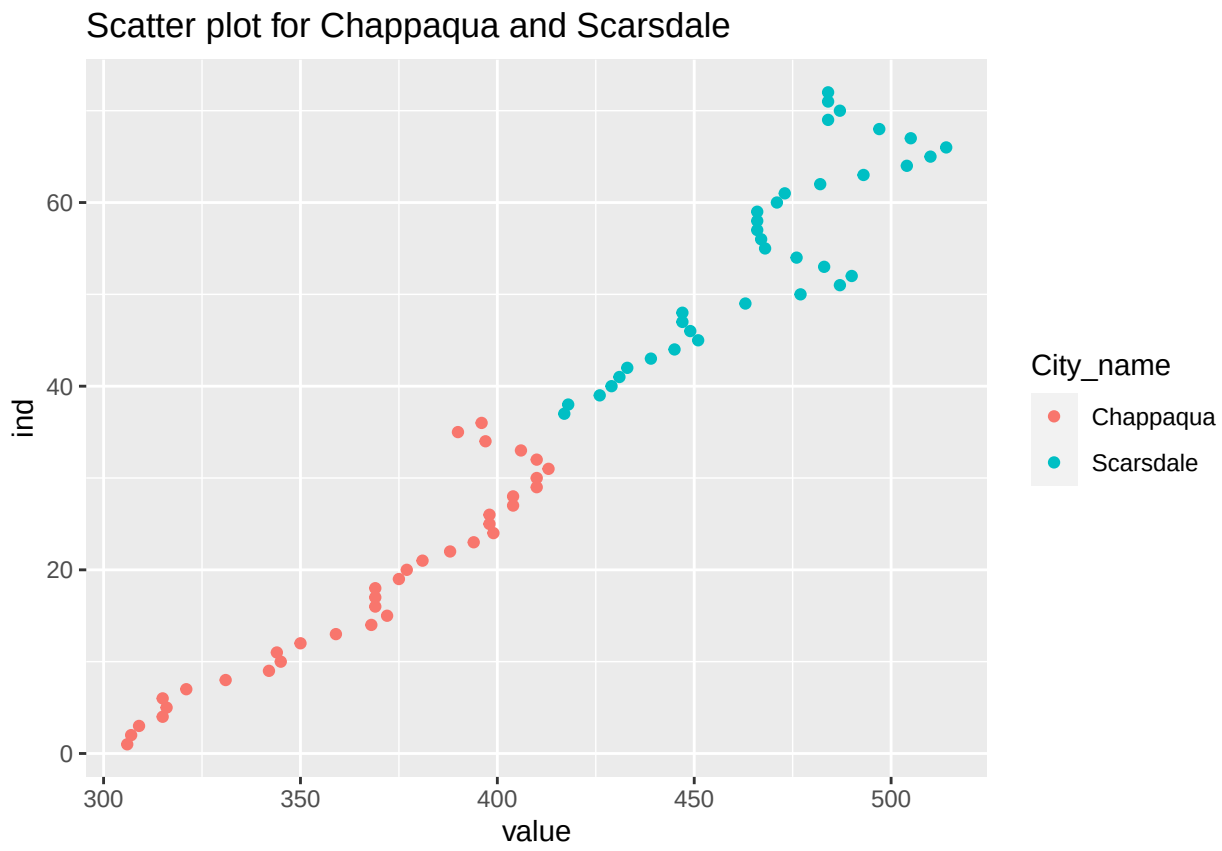
New Report

2023-02-04

Scatter plot for chappaqua and scarsdale

```
all_val =
  hp_three_yr %>%
  filter(City_name=="Chappaqua" | City_name=="Scarsdale") %>%
  pivot_longer(
    `43831`:`44927`,
    names_to = "date"
  ) %>%
  mutate(date_val = as.Date(as.numeric(date),origin="1899-12-30"),
         ind = seq(1,72,1))

ggplot(all_val,aes(x=value, y=ind, color = City_name))+
  geom_point()+
  labs(title="Scatter plot for Chappaqua and Scarsdale")
```



The standard deviation of Chappaqua is `34.948` with a range of `107` dollar per square feet. Scarsdale, on the other hand, has a standard deviation of `26.455` with a range of `97` dollar per square feet. The table shows all the information:

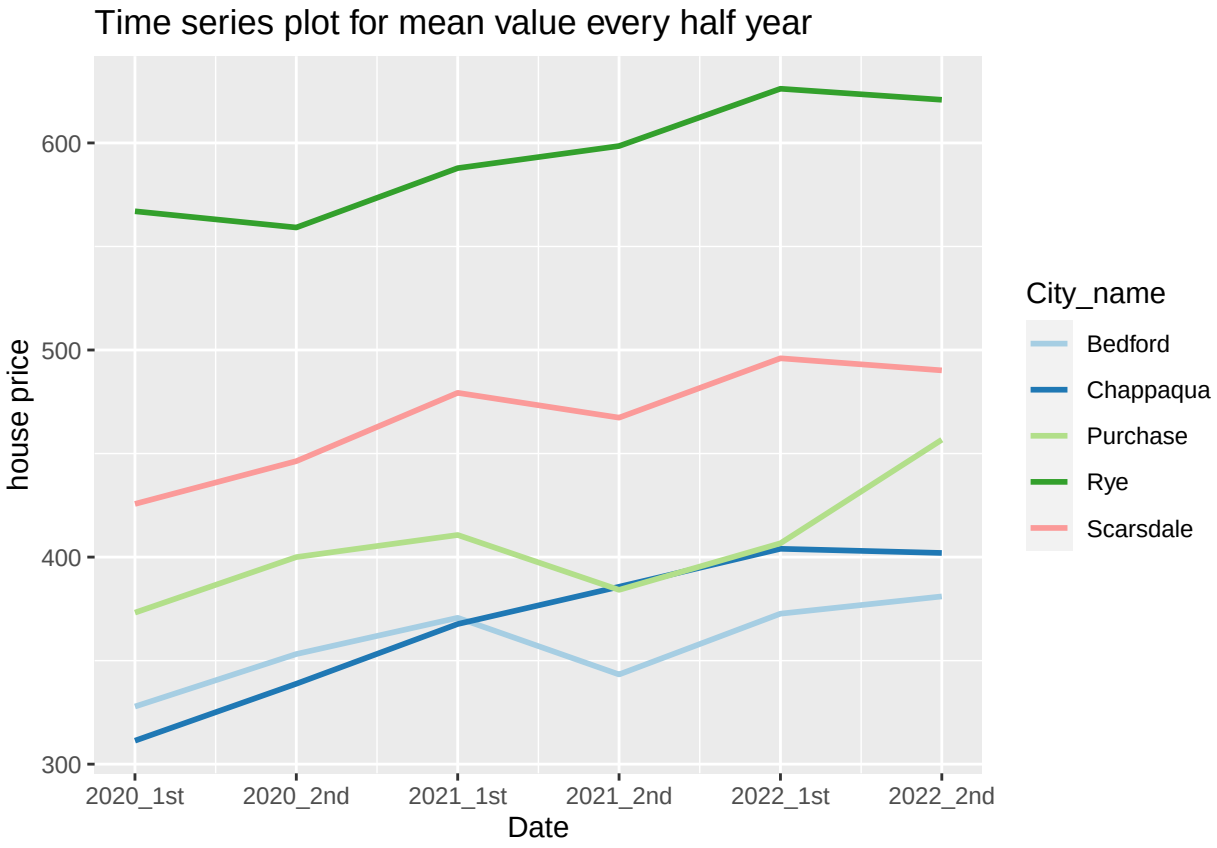
```
## # A tibble: 2 x 4
##   City_name mean_val sd_val range_dollar
##   <chr>        <dbl>  <dbl>        <dbl>
## 1 Chappaqua     368.   34.9          107
## 2 Scarsdale     467.   26.5           97
```

Mean value for each half year

```
## `summarise()` has grouped output by 'City_name'. You can override using the
## `.groups` argument.
```

```
## # A tibble: 5 x 7
##   City_name first_2020 first_2021 first_2022 second_2020 second_2021 second_2022
##   <chr>          <dbl>      <dbl>      <dbl>       <dbl>       <dbl>       <dbl>
## 1 Bedford         328.       371.       373.        353.        343.        381
## 2 Chappaqua       311.       368.       404         339.        386.        402
## 3 Purchase        373.       411.       407.        400         384.        457.
## 4 Rye             567        588.       626.        559.        598.        621.
## 5 Scarsdale       426.       479.       496         446.        467.        490.
```

```
## Warning: Using `size` aesthetic for lines was deprecated in ggplot2 3.4.0.
## i Please use `linewidth` instead.
```

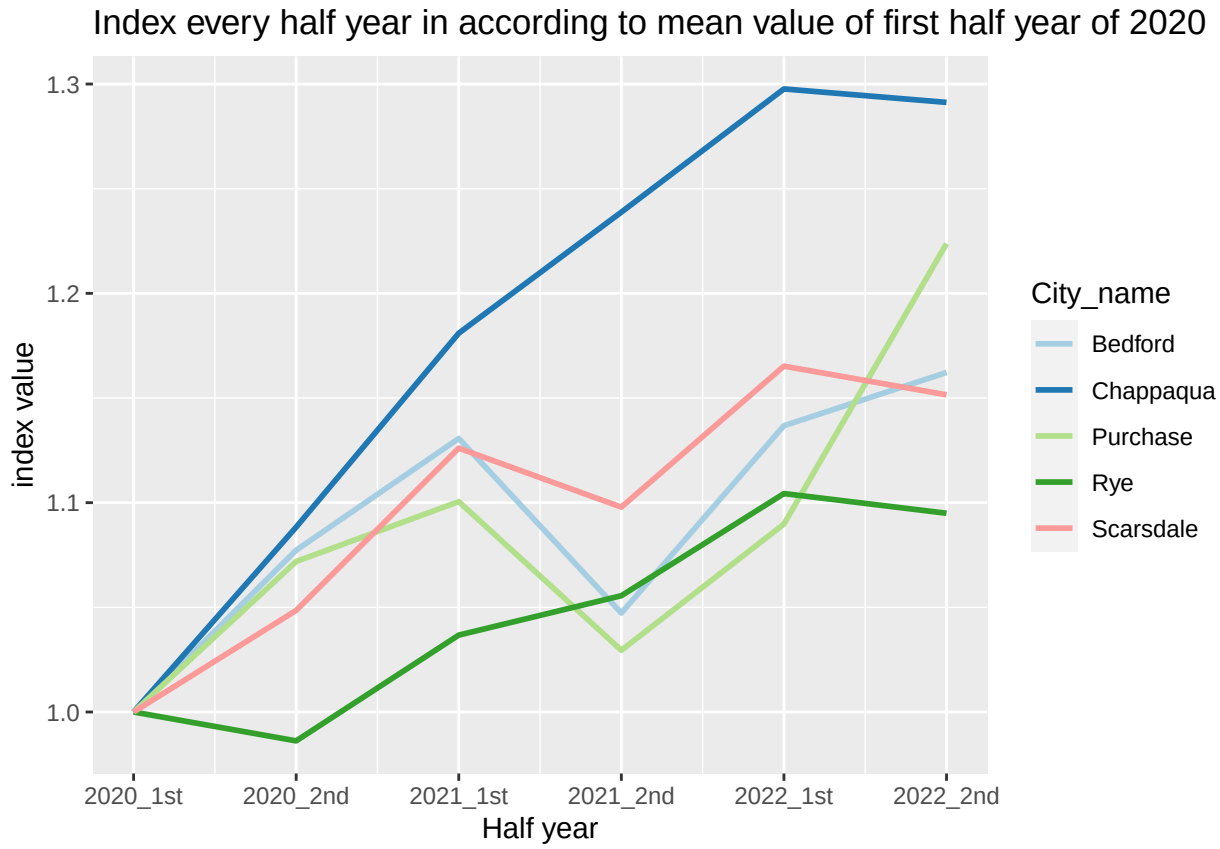


Index

Yearly index

```
## # A tibble: 5 x 7
##   City_name first_2020_index second_2020_index first_2~1 secon~2 first~3 secon~4
##   <chr>                <dbl>             <dbl>     <dbl>   <dbl>   <dbl>   <dbl>
## 1 Bedford                  1              1.08      1.13    1.05    1.14    1.16
## 2 Chappaqua                1              1.09      1.18    1.24    1.30    1.29
## 3 Purchase                 1              1.07      1.10    1.03    1.09    1.22
## 4 Rye                      1              0.986     1.04    1.06    1.10    1.09
## 5 Scarsdale                1              1.05      1.13    1.10    1.17    1.15
## # ... with abbreviated variable names 1: first_2021_index,
## #   2: second_2021_index, 3: first_2022_index, 4: second_2022_index
```

Yearly index plot:



Quarterly index

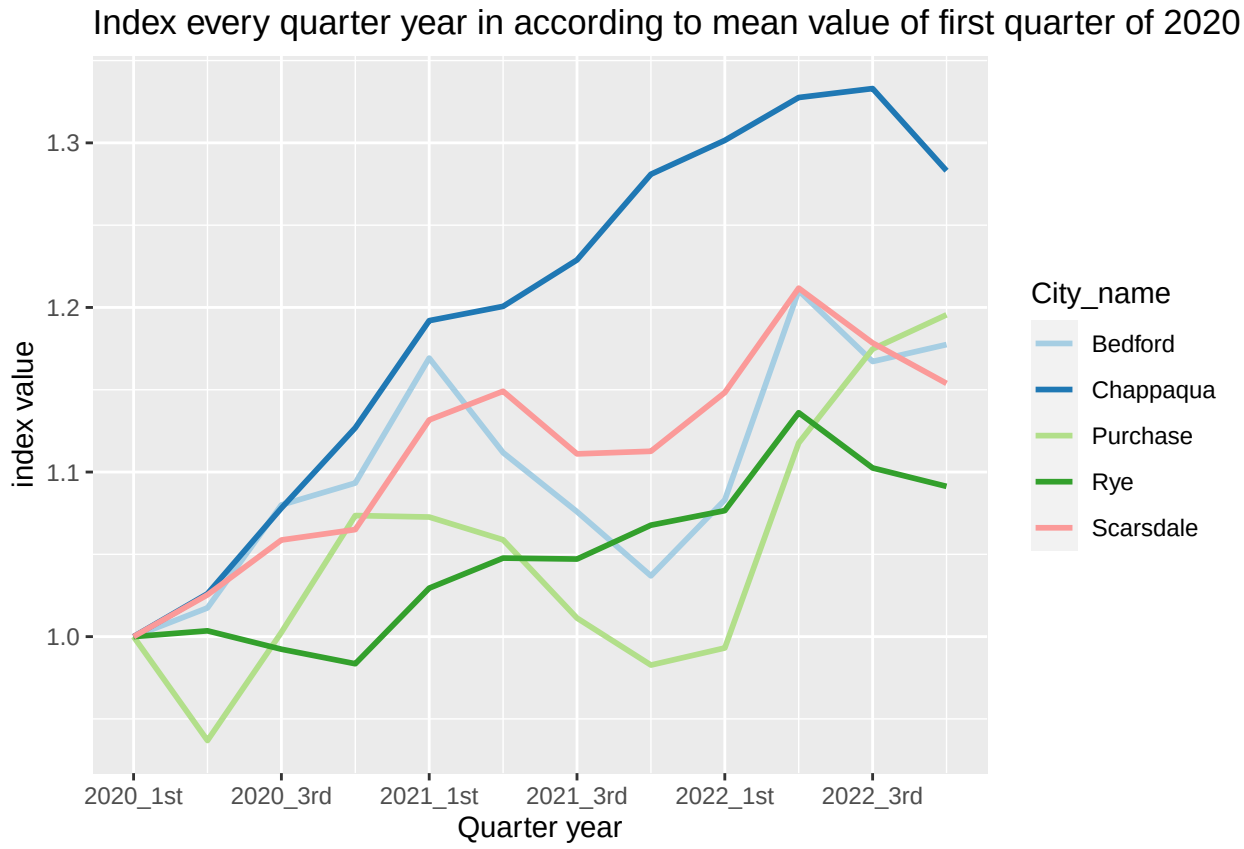
```
## `summarise()` has grouped output by 'City_name'. You can override using the
## `.groups` argument.
```

```
## # A tibble: 5 x 5
##   City_name first_2020_index second_2020_index third_2020_index fourth_2020_in~1
##   <chr>                <dbl>             <dbl>            <dbl>            <dbl>
```

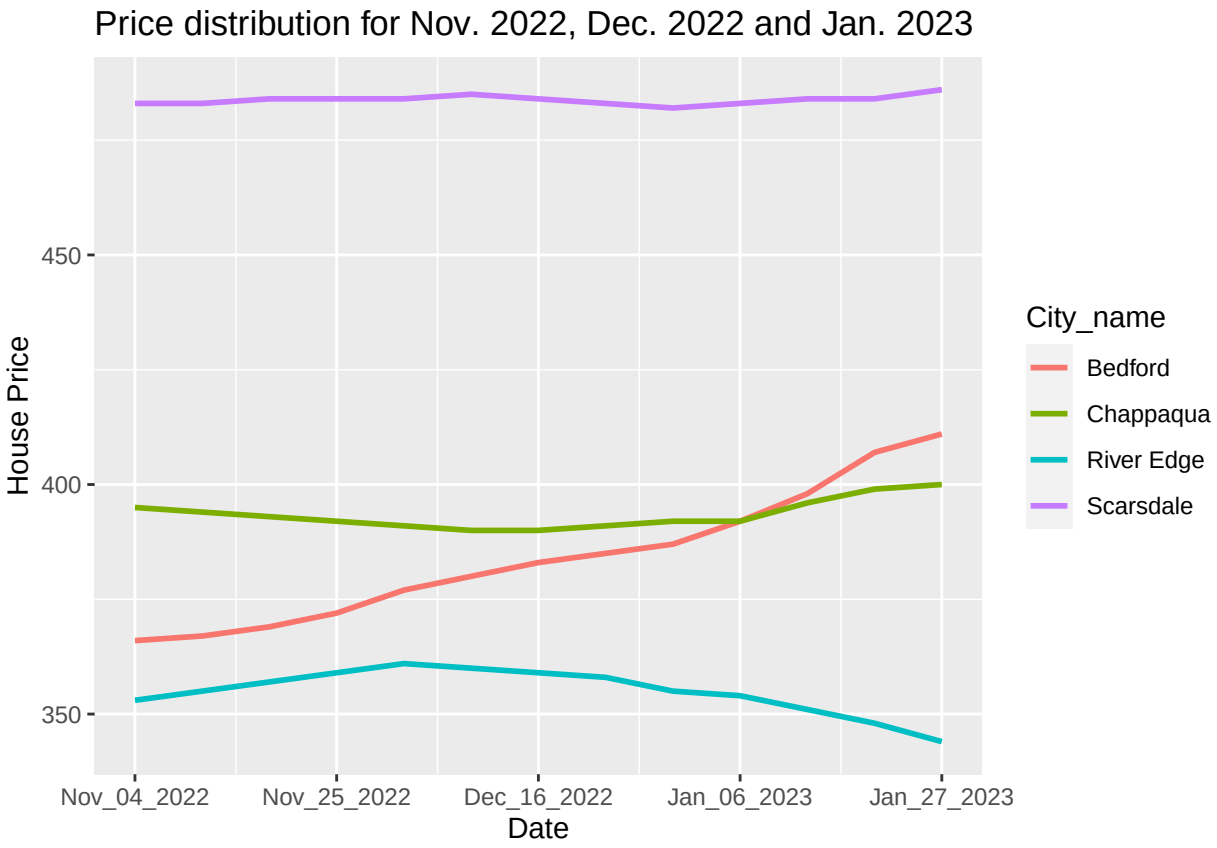
```
## 1 Bedford                   1             1.02             1.08             1.09
## 2 Chappaqua                 1             1.03             1.08             1.13
## 3 Purchase                  1             0.937            1.00             1.07
## 4 Rye                       1             1.00             0.992            0.984
## 5 Scarsdale                 1             1.03             1.06             1.07
## # ... with abbreviated variable name 1: fourth_2020_index
```

```
## # A tibble: 5 x 4
##   first_2021_index second_2021_index third_2021_index fourth_2021_index
##              <dbl>             <dbl>            <dbl>             <dbl>
## 1             1.17              1.11             1.08              1.04
## 2             1.19              1.20             1.23              1.28
## 3             1.07              1.06             1.01              0.983
## 4             1.03              1.05             1.05              1.07
## 5             1.13              1.15             1.11              1.11
```

```
## # A tibble: 5 x 4
##   first_2022_index second_2022_index third_2022_index fourth_2022_index
##              <dbl>             <dbl>            <dbl>             <dbl>
## 1             1.08              1.21             1.17              1.18
## 2             1.30              1.33             1.33              1.28
## 3            0.993              1.12             1.17              1.20
## 4             1.08              1.14             1.10              1.09
## 5             1.15              1.21             1.18              1.15
```



Price distribution for last three month



Summary of the four cities in the range from November 2022 to January 2023

```
## # A tibble: 4 x 4
##   City_name  mean_val sd_val range_dollar
##   <chr>         <dbl>  <dbl>        <dbl>
## 1 Bedford        384.  14.7            45
## 2 Chappaqua      393.   3.23           10
## 3 River Edge     355.   4.97           17
## 4 Scarsdale      484.   1.01            4
```