CASE 1: Apartments Data Set in the DALEX Package

District – m2 Prices

Average Square Meter Prices by District
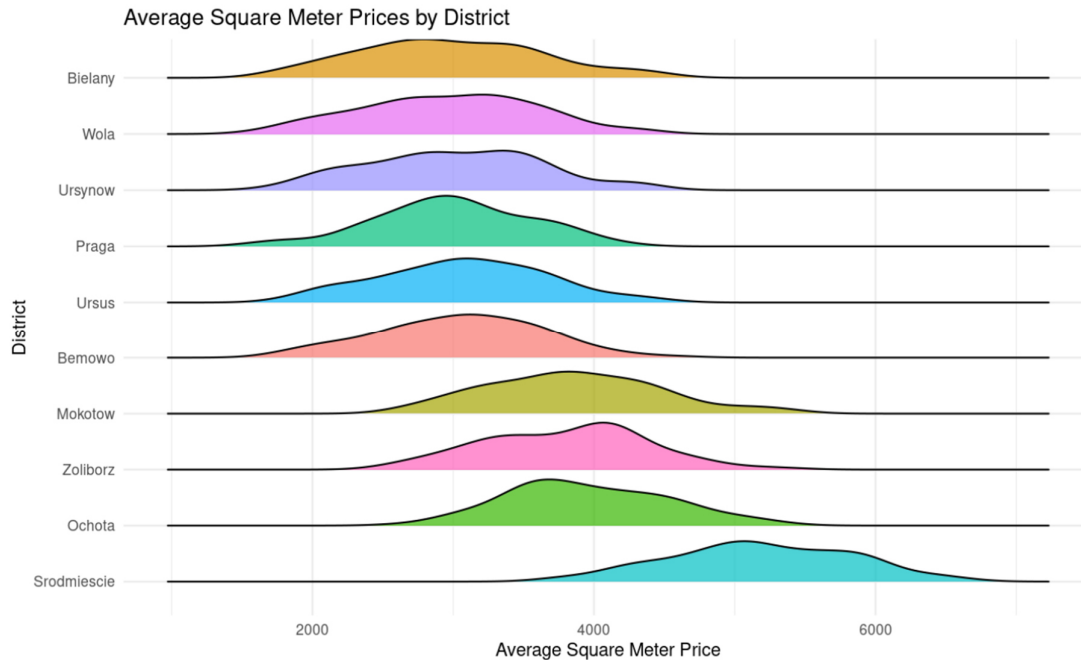
Śródmieście and Mokotów: These two districts peak in the highest price range. Especially in Śródmieście, prices of 6000 TL and above are observed to be high. This shows that the city center and popular areas have higher prices. Żoliborz and Ochota: These districts peak in a slightly lower but still high price range than Mokotów and Śródmieście. Bielany, Ursus and Bemowo: In these districts, the average square meter prices are seen to be lower. Especially the density in the 2000-3000 range indicates that these districts are more affordable compared to other districts. Wola and Ursynów: These districts, which have a medium price distribution, are in the average range when compared to other low or high priced districts. It can be observed that the square meter prices tend to increase as you get closer to the city center and popular districts, and decrease as you get further away from the center. The widths and heights of the curves in the graph show how widely prices are spread over a range and how much price diversity there is in that district. For example, a wide curve indicates that prices are diverse in that district, while a narrow curve indicates that the price range is narrower. In conclusion: The graph allows for a visual comparison of square meter price differences between districts. It is clearly seen that prices are higher in the more popular districts closer to the city center, while lower prices are concentrated in the surrounding districts. This provides important data showing how social and economic differences between districts are reflected in housing prices.

District – m2 Prices – Number of Rooms

Average Square Meter Prices by District and Number of Rooms
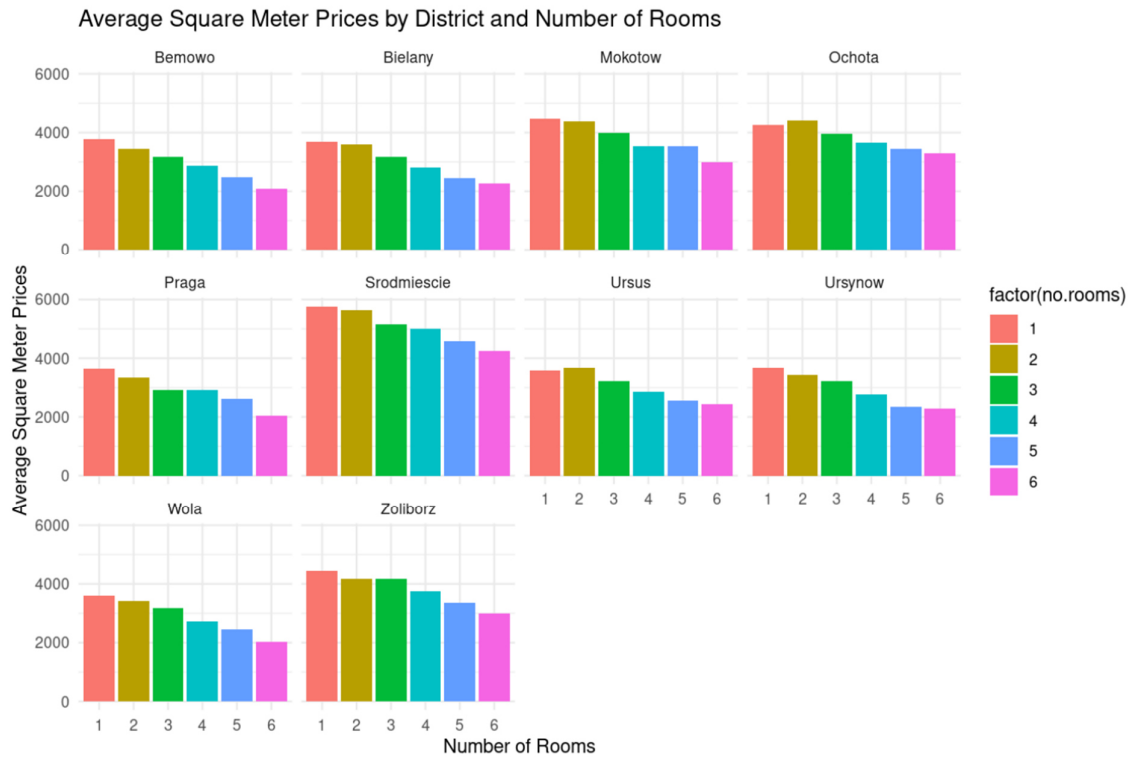
In most districts, the average square meter price decreases as the number of rooms increases. This may indicate that smaller houses are more expensive per unit. For example, in districts such as Srodmiescie and Bemowo, it is clear that the square meter price of one-room houses is higher than other types of houses. However, in some districts (e.g. Ursus), the change in the number of rooms does not seem to make a significant difference in prices. The differences between districts may be explained by demographic and geographic factors, such as the fact that smaller houses are considered more valuable according to the characteristics of the area.

CASE 2: Salaries Dataset in the carDATA Package

Avarage Salaries – Academic Rank

Average Salaries by Academic Title
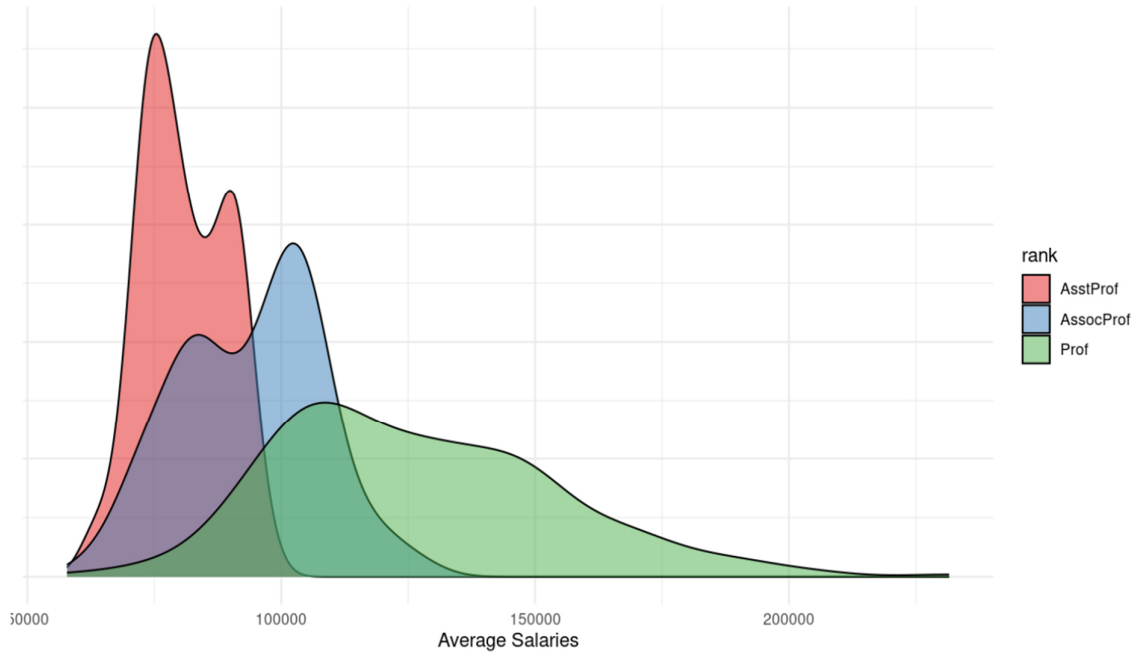
We see that assistant professors' salaries are concentrated in the lower range, suggesting that positions at the lower levels of the academic hierarchy tend to be lower paid, as expected. Associate professors' salaries are concentrated in the range where the average salary is slightly higher. Professors' salaries have the widest range, with the salary distribution more concentrated at the upper levels. This suggests that professors have a wide range of salaries, with most of the highest salaries associated with their title. In general, it appears that salaries increase significantly as academic title increases.

Avarage Salaries – Academic Rank – Gender

Average Salaries by Title and Gender
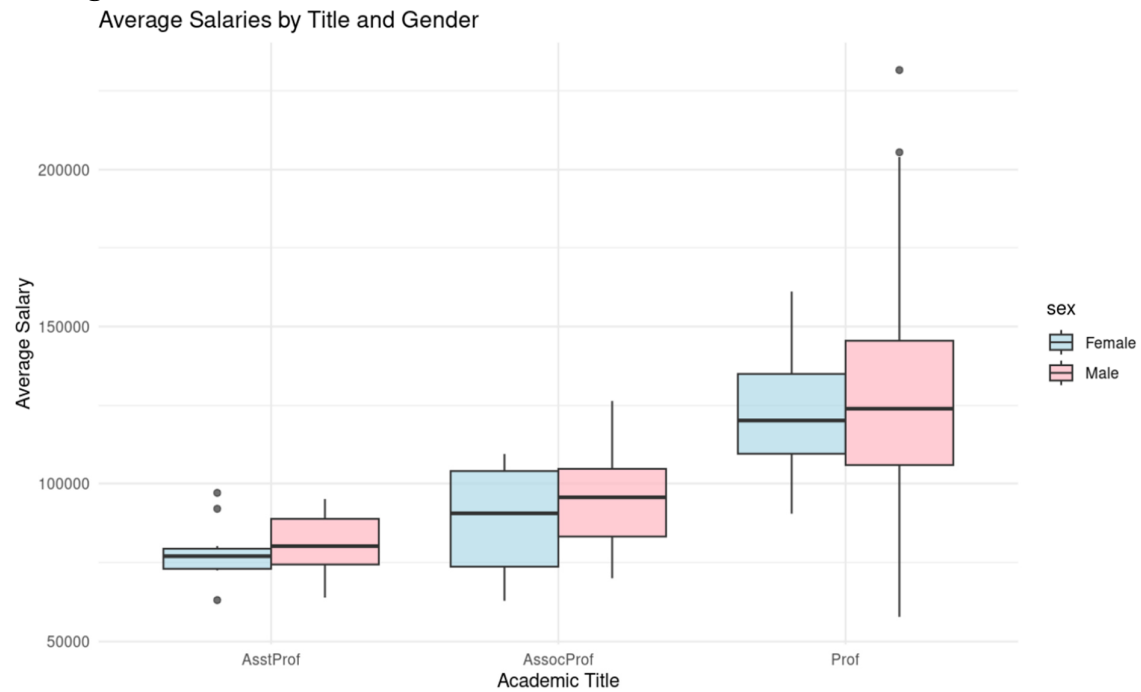
At the Asst. Prof level, men's salaries are generally higher than women's. The average value of women's salaries is lower and the distribution is narrower. At the Assoc. Prof level, salaries are relatively more evenly distributed by gender, but a wider range can be observed for men. On average, women's and men's salaries are concentrated at similar levels. At the Prof. level, the average value of men's salaries is higher and more widely distributed than for women professors. This shows that a large part of the highest salaries are concentrated in male professors. In general, there is a gender pay gap, and this gap becomes especially pronounced at higher academic levels.