

In this analysis, I utilized exploratory data analysis (EDA) techniques to gain insights from a dataset of bike rentals. Specifically, I employed methods such as conditional mean calculations, and examination of combinations of features to uncover patterns and understand rental patterns. Initially, we explored the dataset by calculating conditional means using `'resample()'` to aggregate rentals by month. This provided me with an overview of the average rentals over time. I observed that rentals were higher in 2012 compared to 2011, suggesting a potential upward trend.

Next, I examined the relationships between different factors. For instance, I noted that more bikes were rented on average during summer days compared to winter days, which aligns with expectations. Additionally, I found that bike rentals were lower during holidays compared to regular days, indicating a potential impact of holidays on rental demand.

Furthermore, I analyzed the mean rentals based on combinations of features, such as working/non-working days and seasons. The results showed that bike rentals were generally higher on working days compared to non-working days, except during the summer season where non-working days exhibited slightly higher rentals.

Overall, the EDA techniques employed in this analysis provided valuable insights into bike rental patterns. I discovered various relationships between factors such as time of year, working days, and specific hours of the day, which can be useful for understanding rental demand and informing decision-making in bike rental businesses or related industries.