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Statistics in the Real World

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Statistics in the Real World: Week Two Reflection

Luckily, compared to the previous week, I found this week to be more interesting. Specifically, I particularly enjoyed, relatively speaking, learning about linear regressions. I found it interesting that we can adjust linear regressions to better fit our needs by offsetting the y-intercept and/or slopes. These models are called parallel slopes and interaction, respectively. Parallel slopes works by adding some offset to the y-intercept depending on the value of some variable. On the other hand, interaction models work by offsetting the slope of a linear regression (i.e., adding to the slope by some value based on the value of a variable within the dataset). Besides modelling, I enjoyed learning about sampling. I think it’s an interesting question as to how one can validate sample means (\bar{x}) and sample proportions (\hat{p}). Though, given the advantage of having the entire population (during a simulation), one can easily validate these approximations. I do wish that we would dive more into the actual mathematics of how linear regressions are trained (e.g., gradient descent). I am looking forward to hypothesis testing next week though.