

## Lesson 20 - multiple Linear Regression

\* without interactions

Recall:  $\hat{y} = \beta_0 + \beta_1 x_1$

Adding variables:  $\hat{y} = \beta_0 + \beta_1 x_1 + \beta_2 x_2$

→ For every unit increase in  $x_1$ , we expect  $\hat{y}$  to change by  $\beta_1$ , on average after adjusting for  $x_2$ .

→ Controlling for  $x_2$  means taking away the variability, or it to isolate the effect of  $x_1$ .