

SIPPS Coding Workshop: advanced track
01: Refresher of regression and moderation (Frequentist)

Hannah & Camille

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Before we begin

- ▶ make sure you have R/RStudio downloaded on your machines! (if you don't, check out this tutorial: <https://cu-psych-computing.github.io/cu-psych-comp-tutorial/tutorials/r-core/1-programming/lessonpart0/>)
- ▶ please let us know if we're ever moving too fast! (or too slow)
- ▶ any and all questions are welcome, at any time
- ▶ recordings of this workshop, plus annotated notes of the code we'll be going through today, will be available shortly after the session

Plan for today

- ▶ what is a linear regression model? (quick review)
- ▶ prepping your data for analysis
- ▶ using the `lm()` package & interpreting the output
- ▶ visualizing your results

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- ▶ $\text{enjoyment} \sim (\text{yelp rating}) + (\text{type of restaurant})$

Types of variables

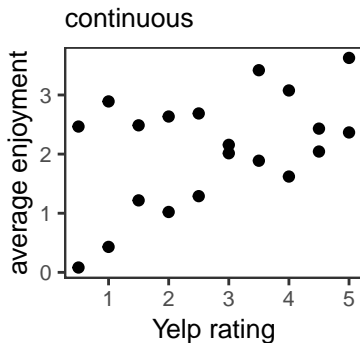
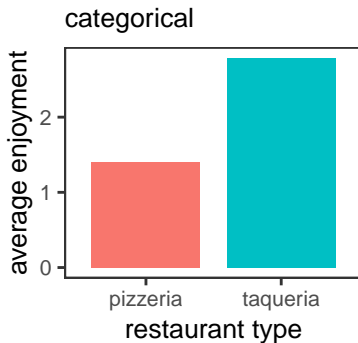
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- ▶ in our toy model, for example, we are looking at two different types of moderators/predictors: **continuous** (the yelp rating) & **categorical** (the type of restaurant)

Types of variables

- ▶ example results:



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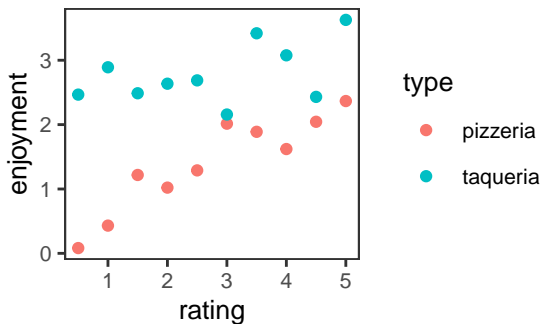
- ▶ there are two main “classes” of effects that regression models can reveal
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- ▶ **main effects**: the value of one predictor (by itself) has an impact on the outcome variable
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- ▶ `enjoyment ~ (yelp rating) * (type of restaurant)`

Types of effects

- ▶ here we see the interaction: the importance of Yelp rating to overall enjoyment *depends* on the type of restaurant



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