Agenda:

Introduction:

Part 1: Some data is meant to be consumed visually.

Visualization lets you see the big picture

Beyond the numbers with Anscombe Quartet

Translating visuals to action

Part 2: The Grammar of Graphics

Encoding: Converting something from one system of communication to another. How numbers and information are converted for visual consumption.

Data observations:

Transformations: How do we need to manipulate our data for analysis?

Granular/Aggregated?

Group by/Calculations/Standardizations?

Scaffolding: Plot area. Canvas.

Axis, Scale, Orientation

Encode data as objects in space

Objects:

Categoric: Shape, Color, Label

Continuous: Shade, Size

Spatial:

Categoric: Series, Facets, order(time)

Continuous: Position, proximity, density, size

Part 3: Put it into practice

Pro Tip: Attempt to describe the top of exploration in plain English.

Example 1: Compare two means with a p val of 99%

So really I am comparing two distributions that have been found to likely be dis-similar. Ok easy, we should be able to see this visually.

Visual creation process.

Data Transformation:

1. Binning - Group by
2. KDE – Standardize for compatibility
3. Plot
4. Evaluate

Example 2: Wolves