

# Relationships between continuous variables

EXPLORATORY DATA ANALYSIS IN POWER BI

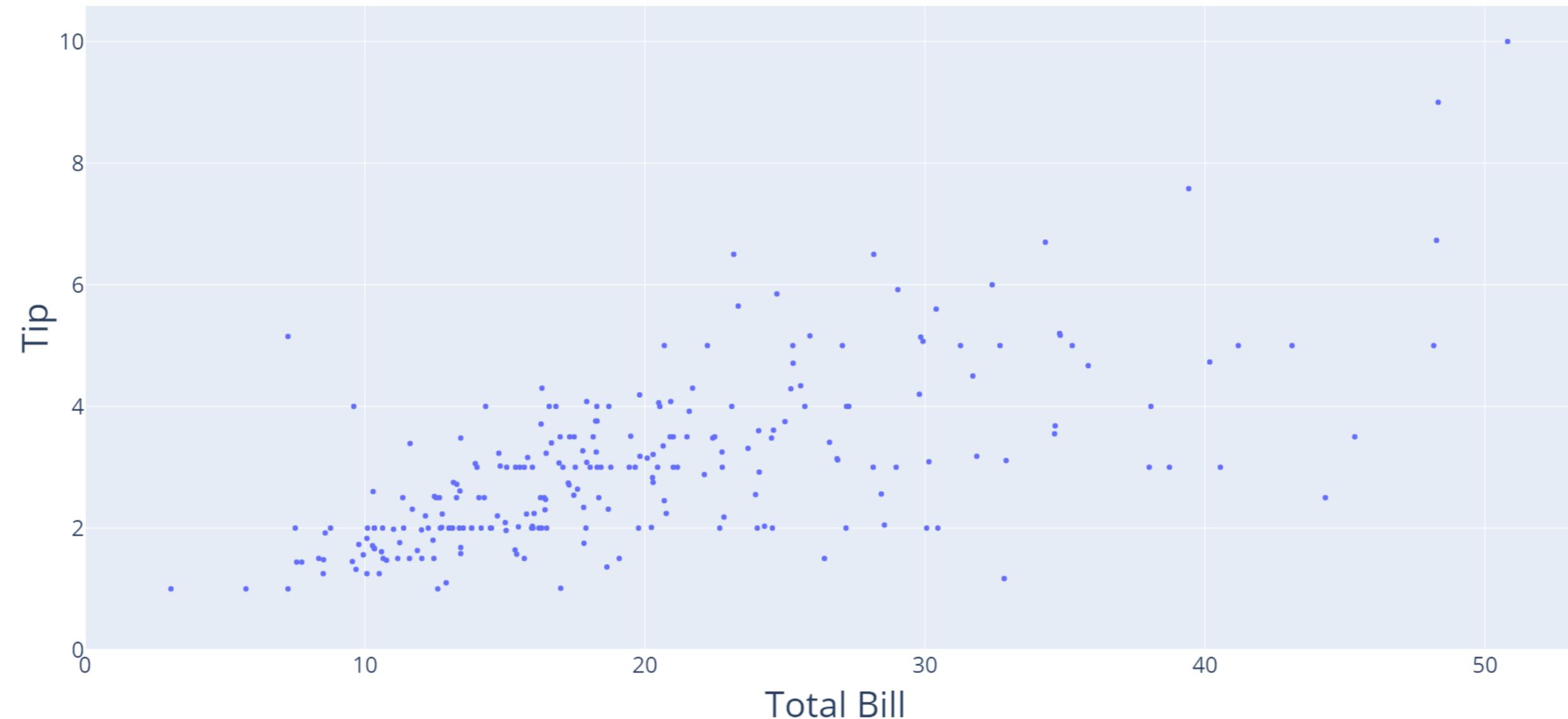


**Maarten Van den Broeck**

Content Developer at DataCamp

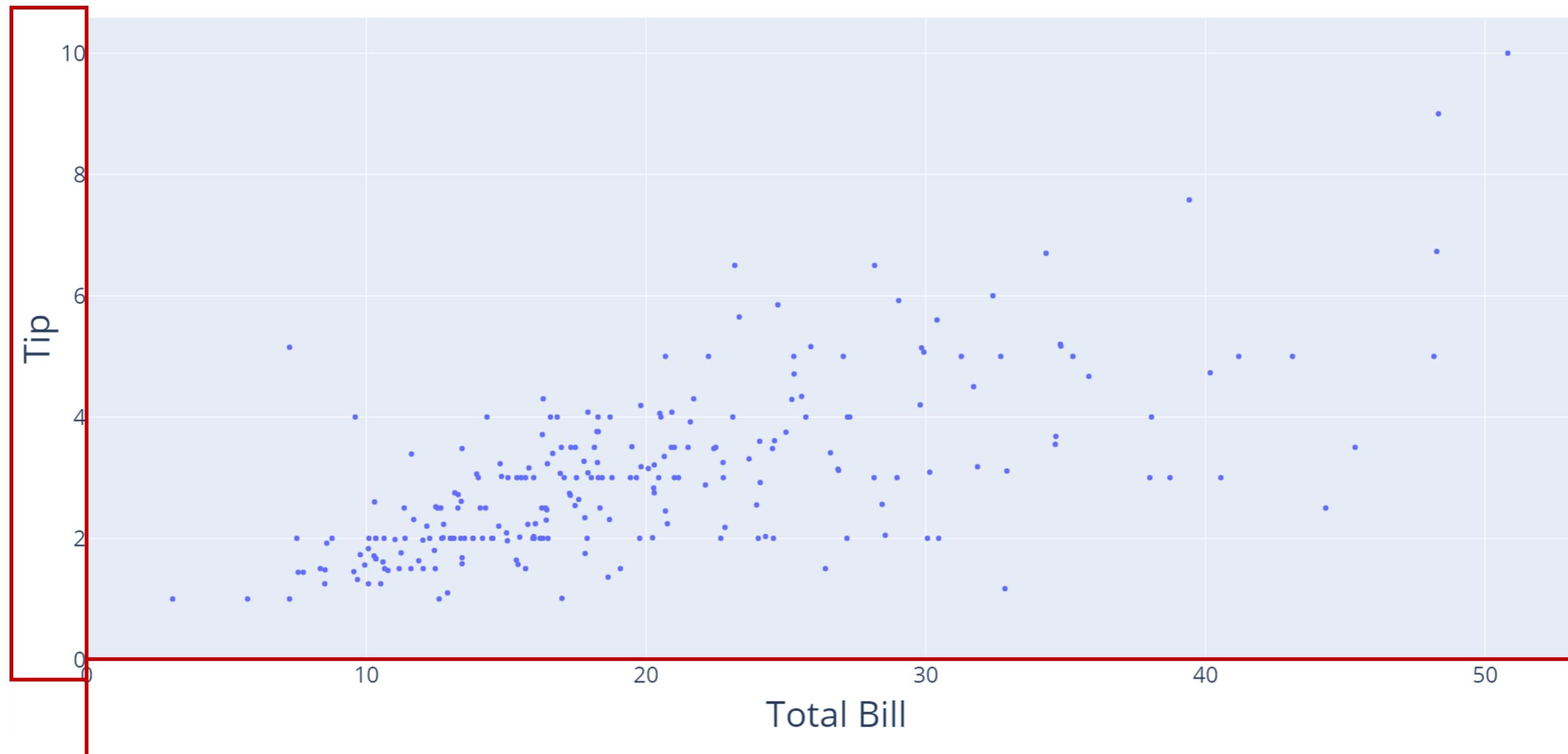
# What are scatter plots?

Tip Amount vs. Total Bill



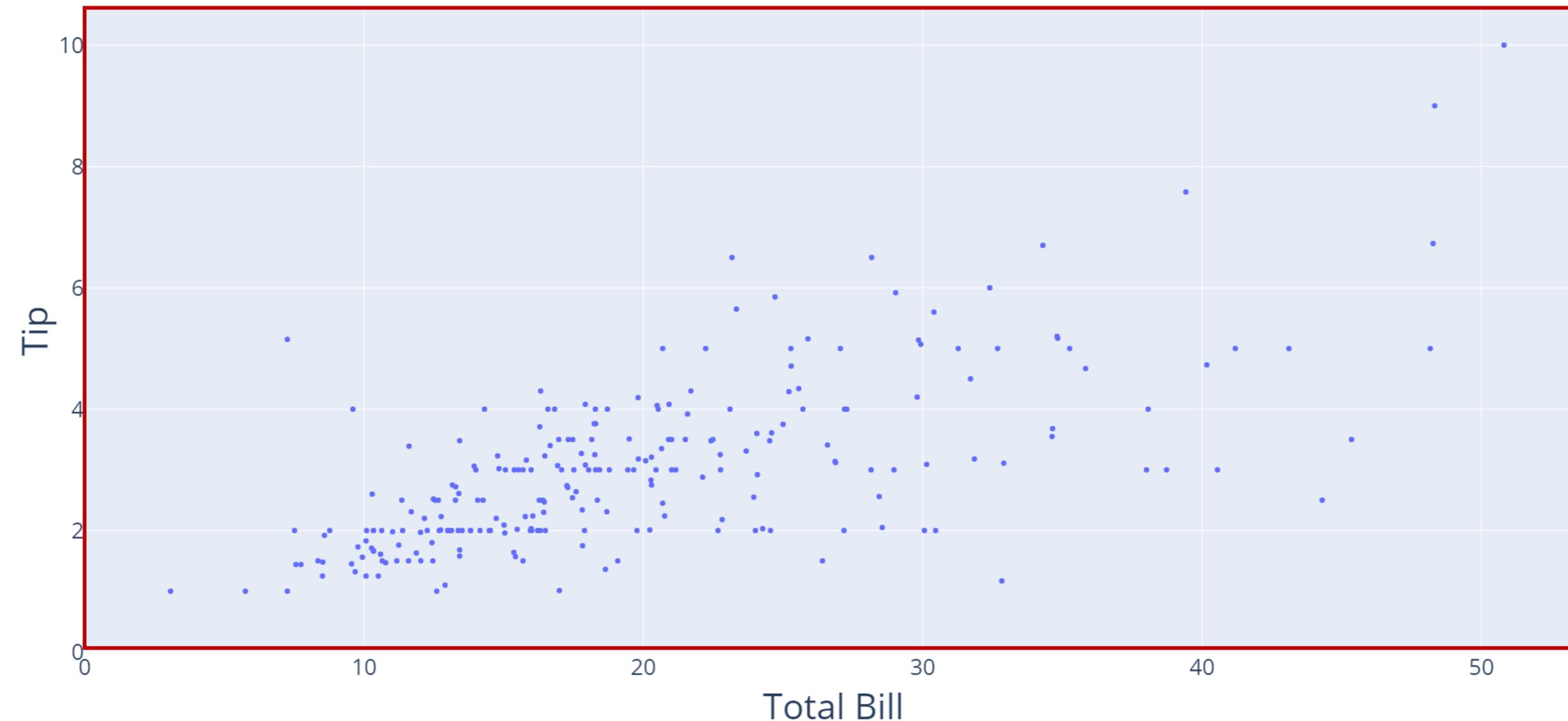
# What are scatter plots?

Tip Amount vs. Total Bill



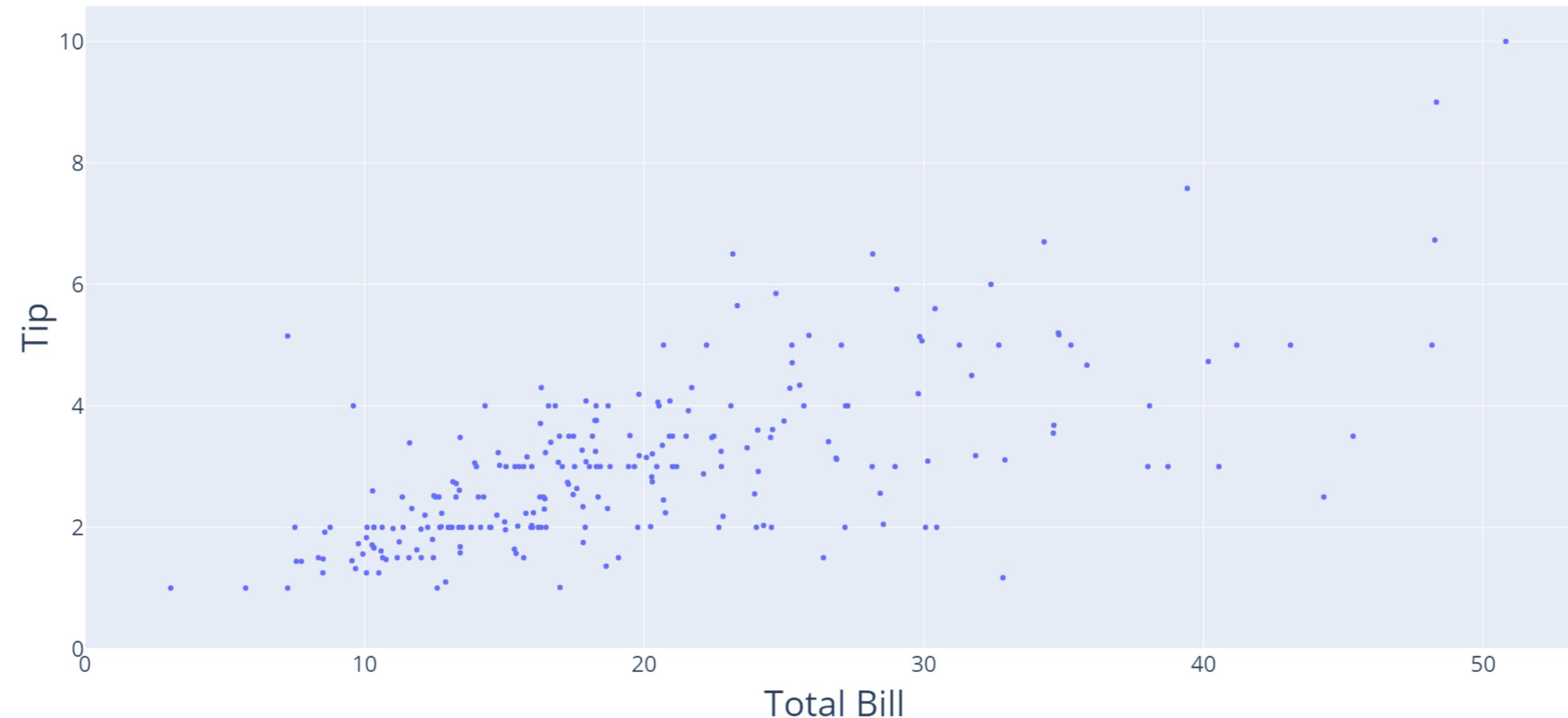
# What are scatter plots?

Tip Amount vs. Total Bill



# Interpreting a scatter plot

Tip Amount vs. Total Bill



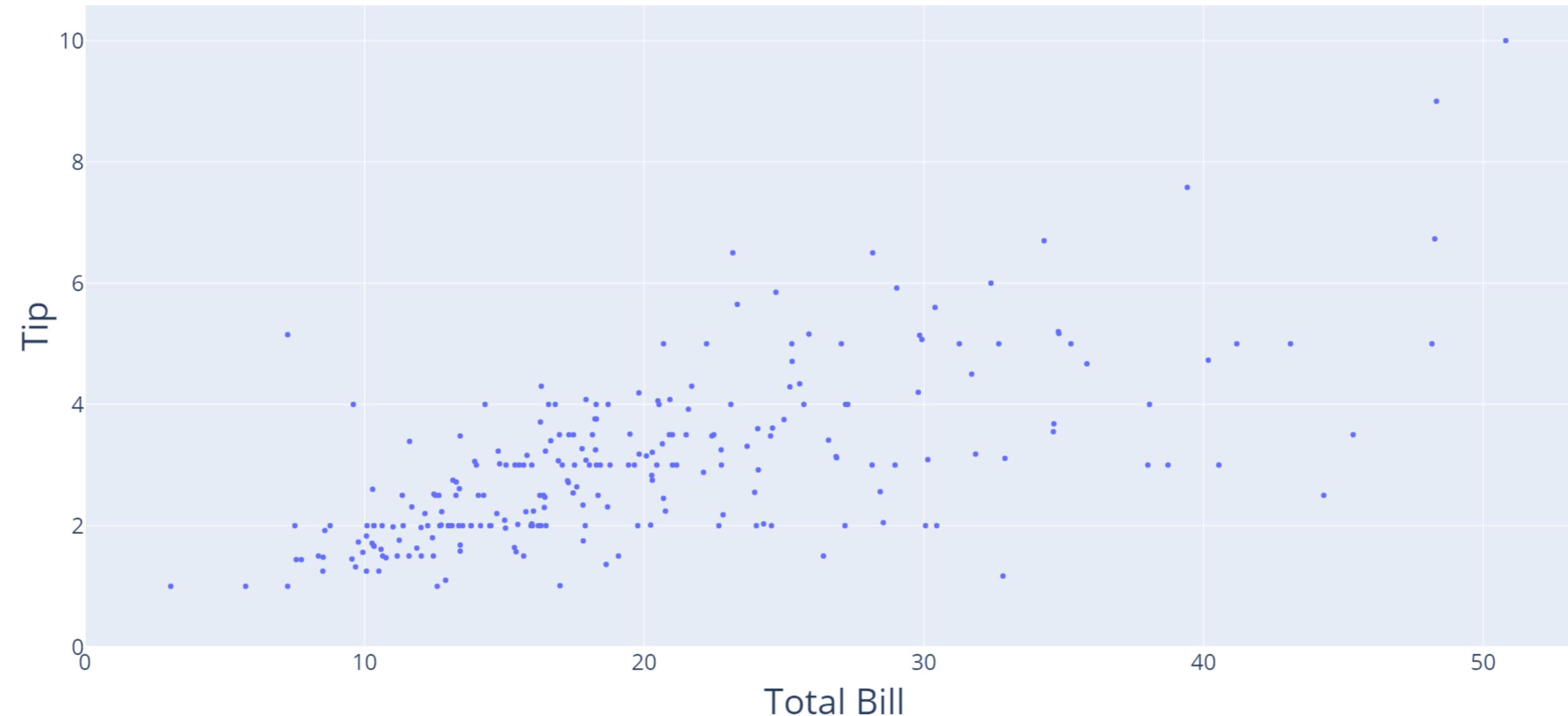
# Interpreting a scatter plot

Tip Amount vs. Total Bill



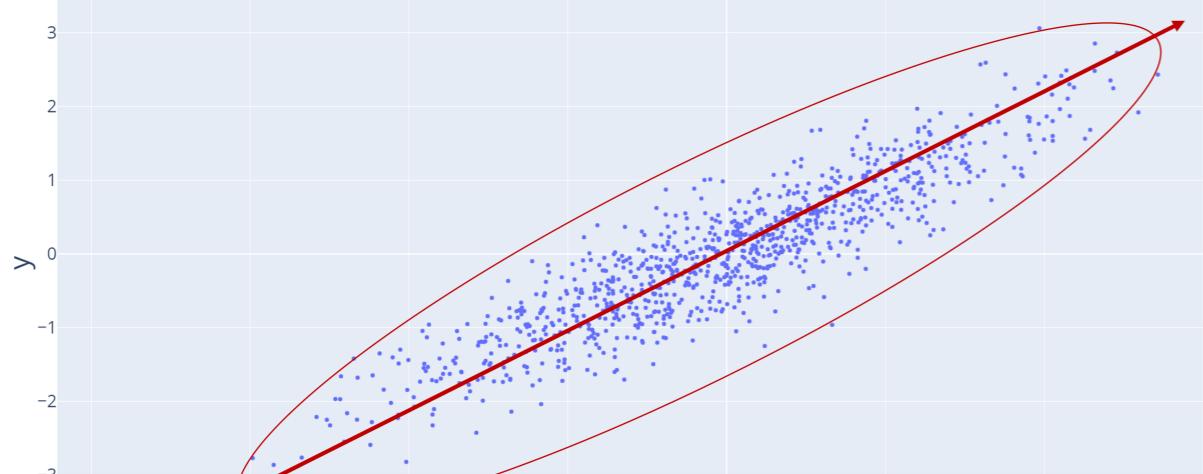
# Interpreting a scatter plot

Tip Amount vs. Total Bill

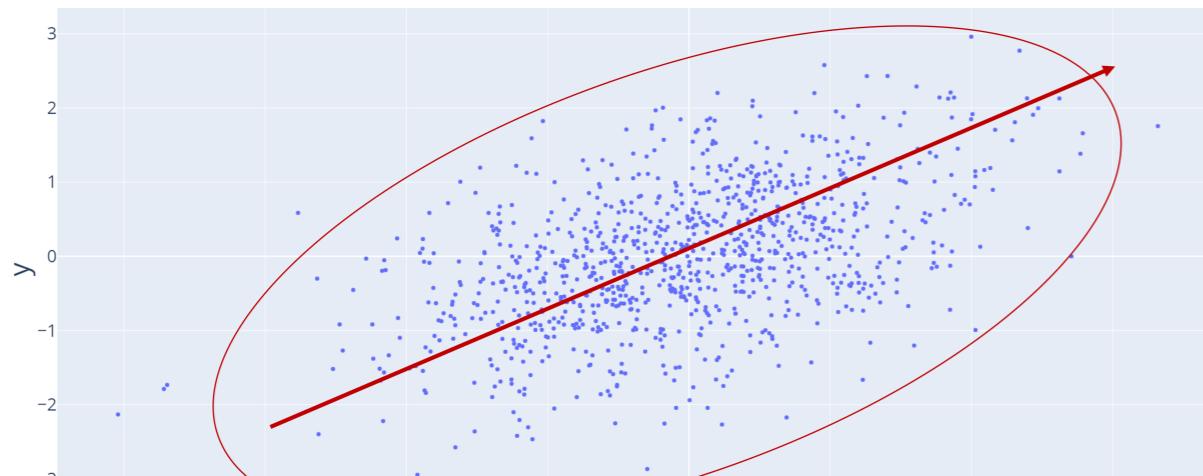


# Interpreting a scatter plot

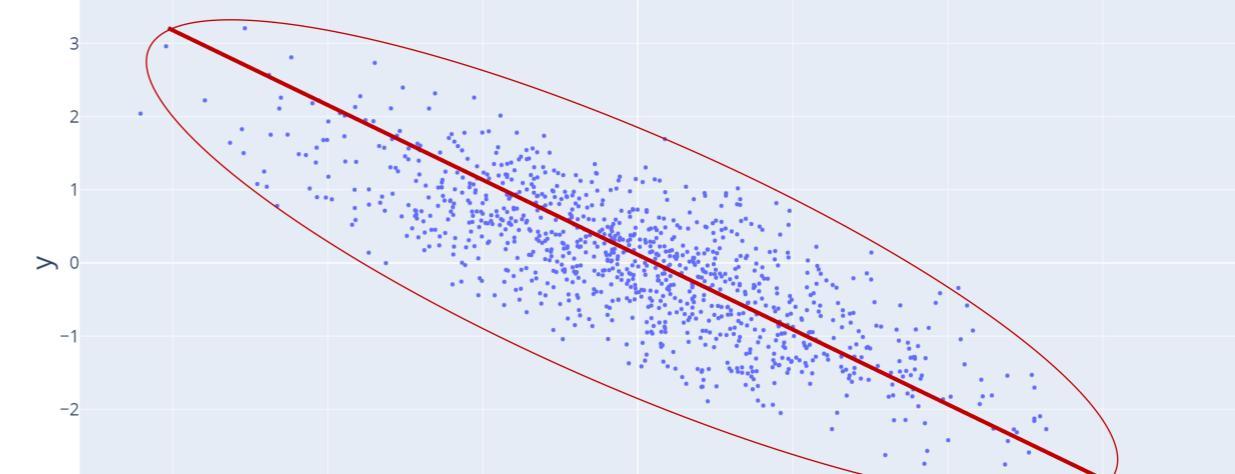
Strong-positive



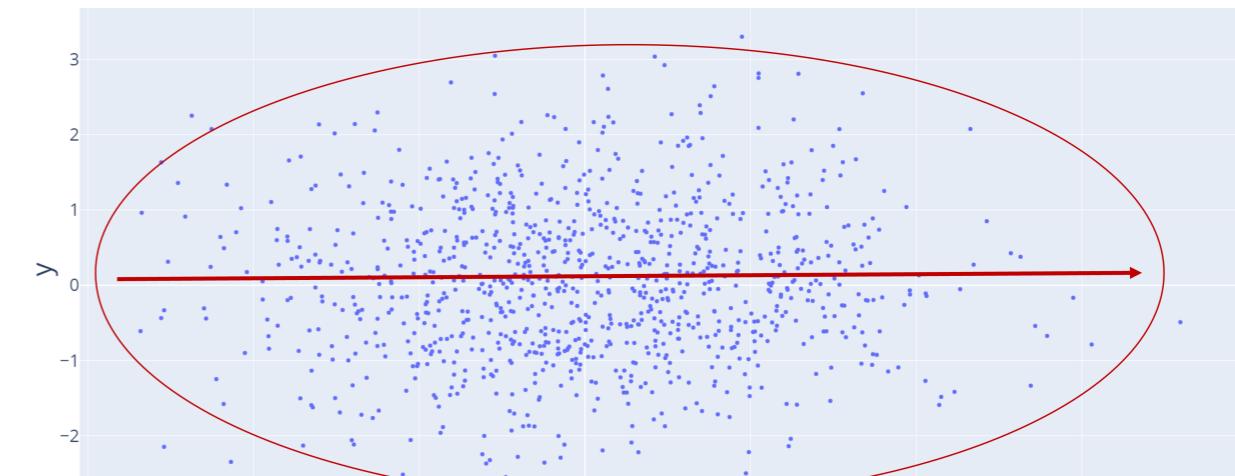
Weak-positive



Strong-negative



No relationship



# Correlation coefficient

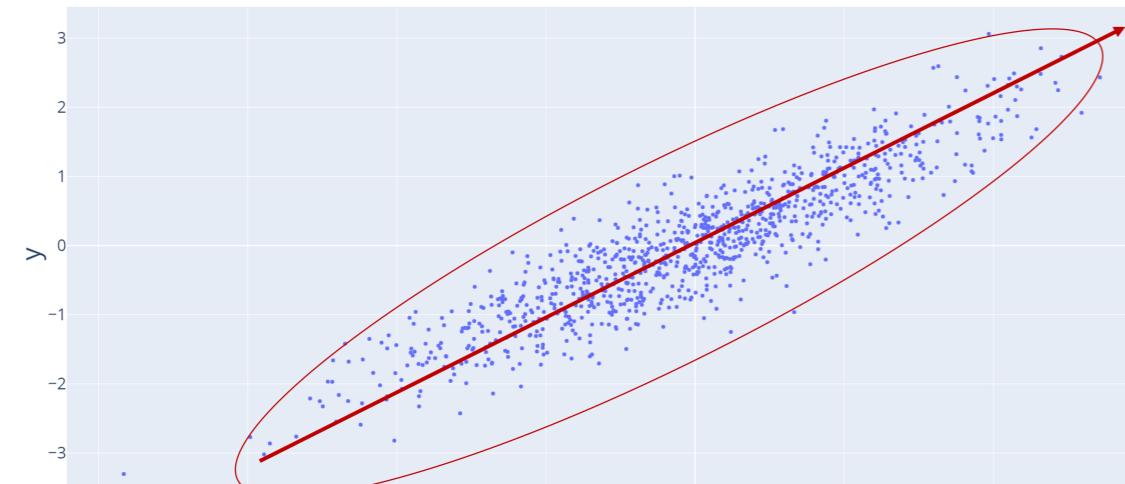
- Used to quantify the relationship
- Represented by the letter,  $r$

| $r =$ | Relationship description |
|-------|--------------------------|
| -1    | Strong-negative          |
| 0     | No relationship          |
| 1     | Strong-positive          |

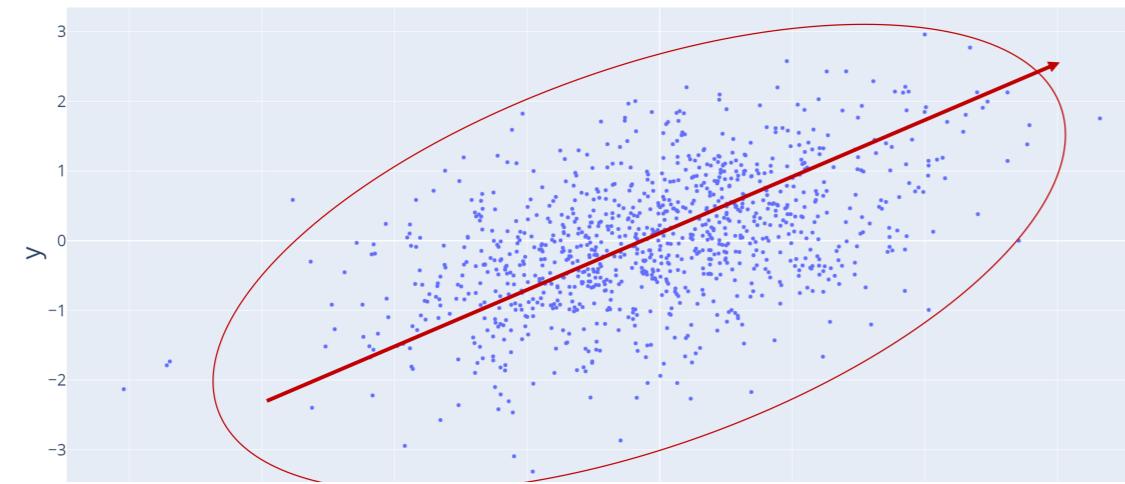
Calculating the correlation coefficient is beyond the scope of this course

# Correlation coefficient and scatter plots

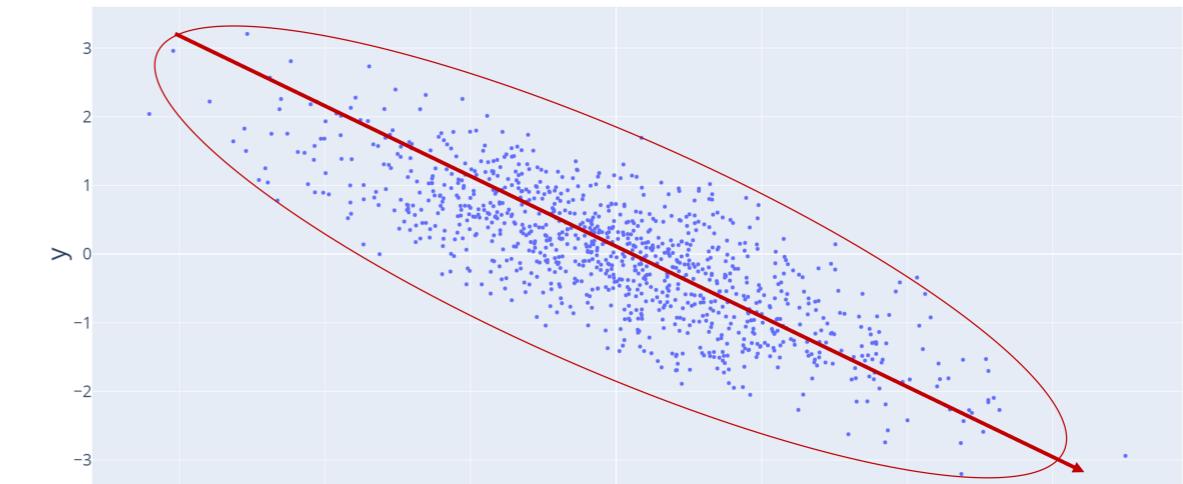
Strong-positive  $r=0.9$



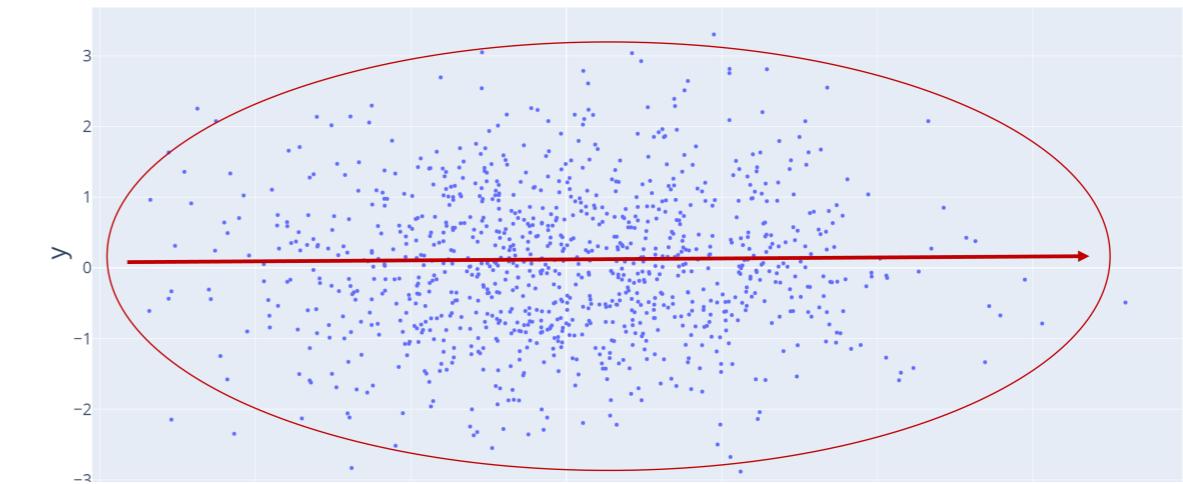
Weak-positive  $r=0.35$



Strong-negative  $r=-0.9$

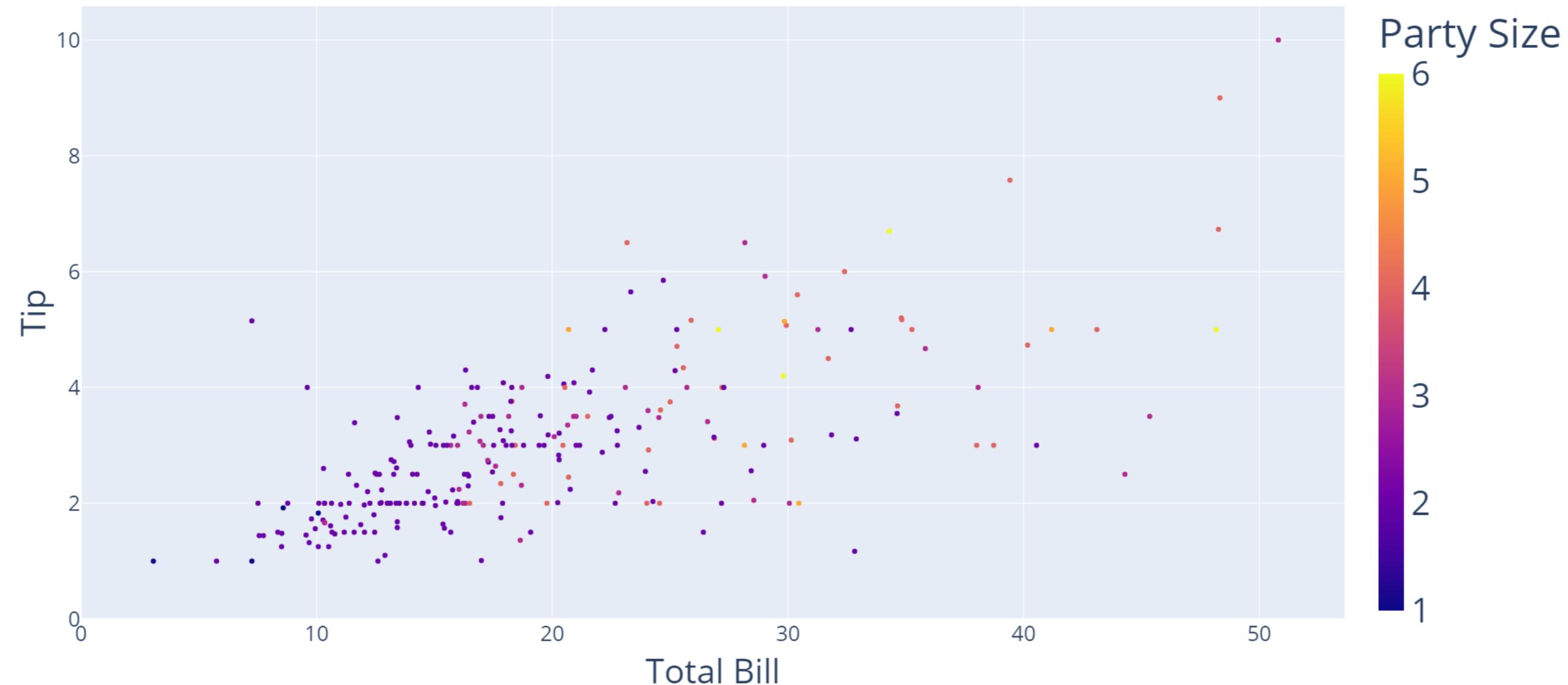


No relationship  $r=0.0$



# Adding context to a scatter plot

Tip Amount vs. Total Bill



# **Let's practice!**

**EXPLORATORY DATA ANALYSIS IN POWER BI**

# Exploring AirBnB listings with scatter plots

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**Maarten Van den Broeck**

Content Developer at DataCamp

# **Let's practice!**

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# Congratulations!

EXPLORATORY DATA ANALYSIS IN POWER BI



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# Your first steps with EDA

- Identifying and imputation of missing data
- Address outliers
- EDA with categorical variables
- EDA with continuous variables
- Histograms
- Box plots
- Scatter plots

# What's next?

- Trend Analysis in Power BI
  - Time series
  - Decomposition trees
  - Key influencers

# **Let's practice!**

**EXPLORATORY DATA ANALYSIS IN POWER BI**