

# Relationships between continuous variables

EXPLORATORY DATA ANALYSIS IN POWER BI

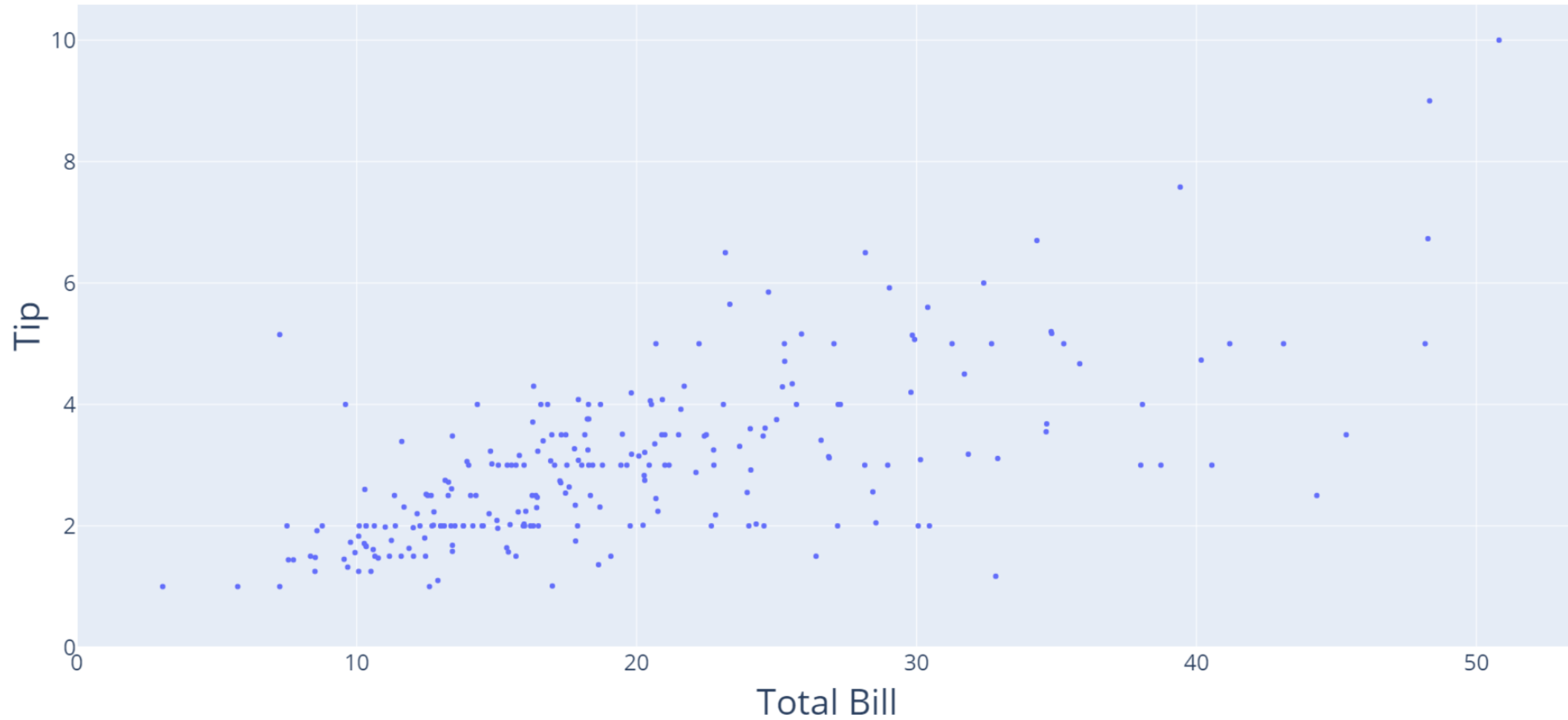


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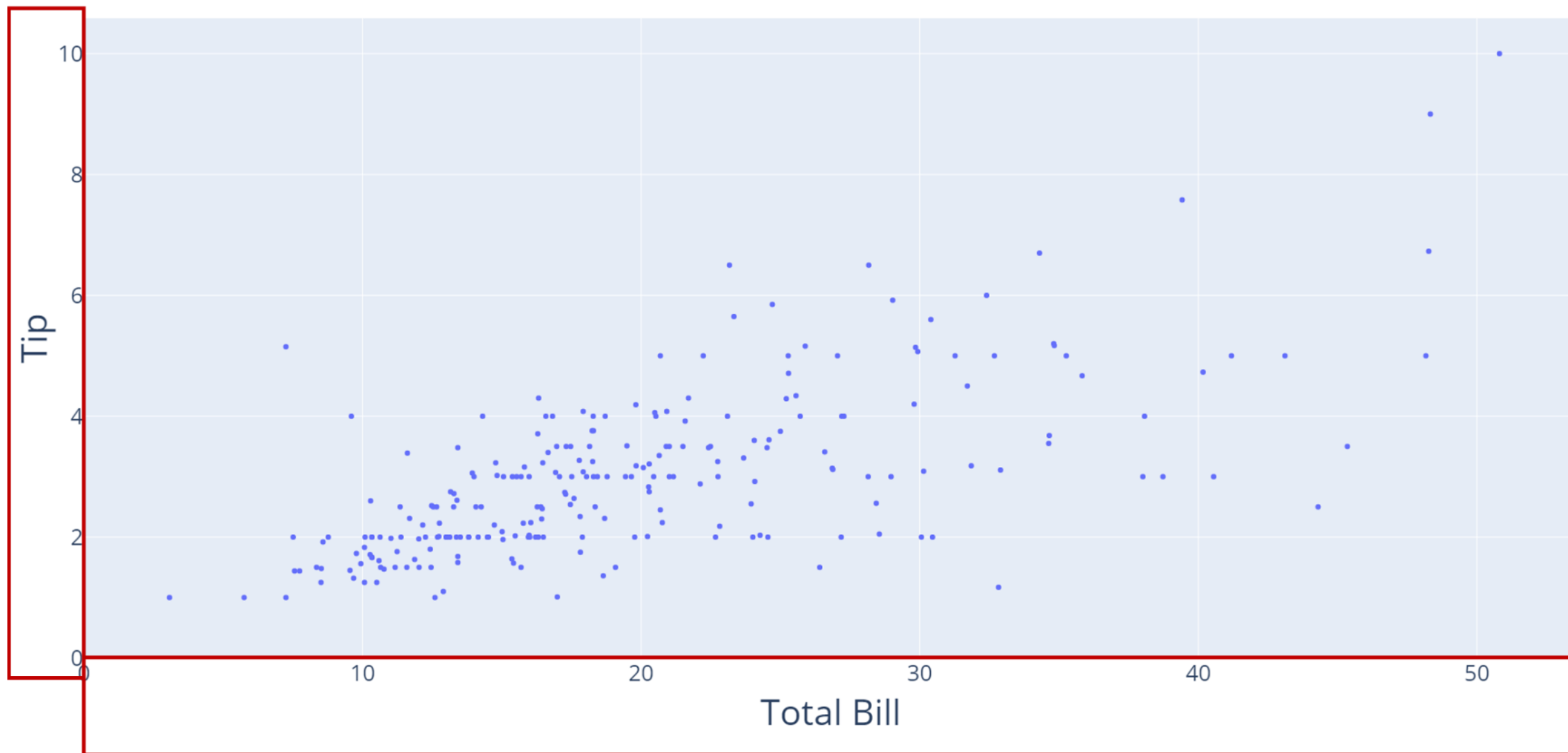
# What are scatter plots?

Tip Amount vs. Total Bill



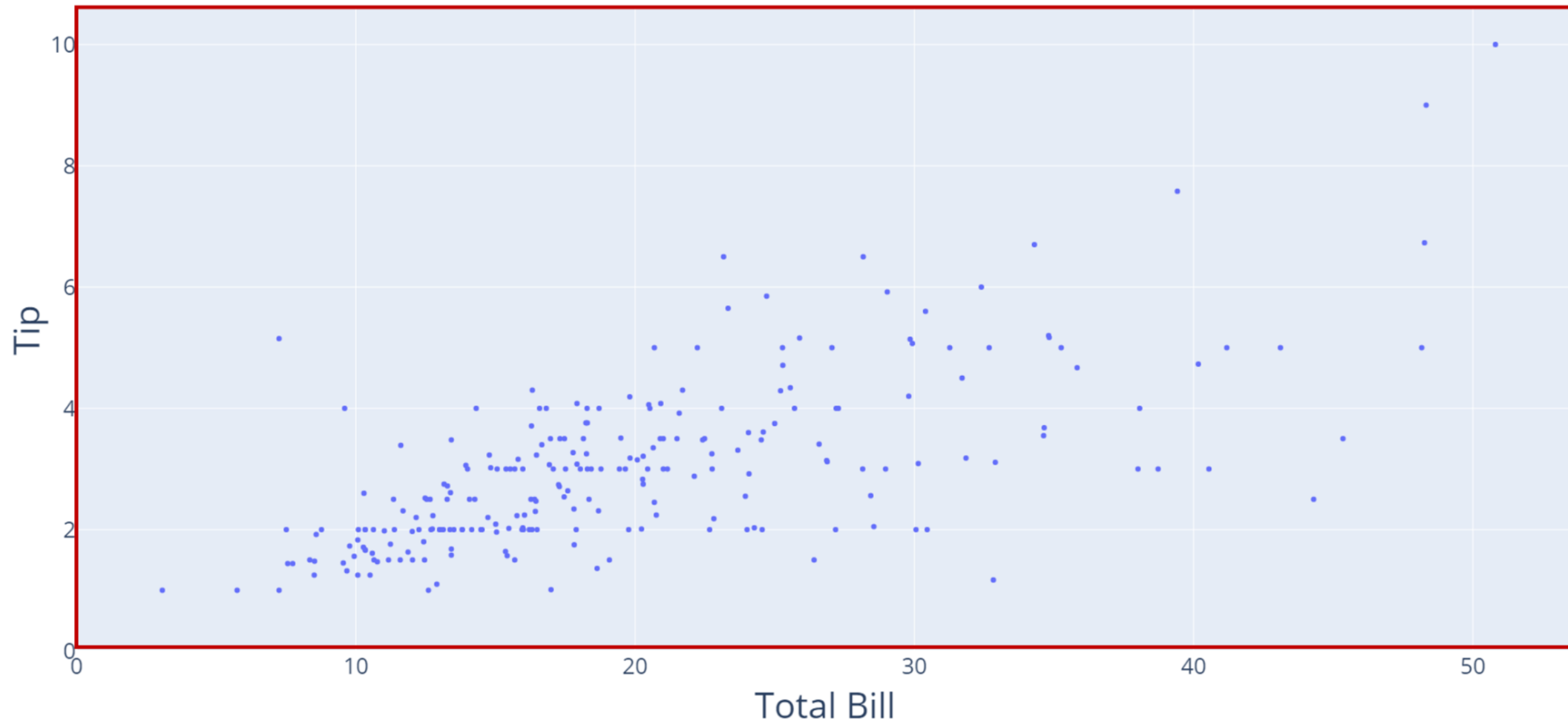
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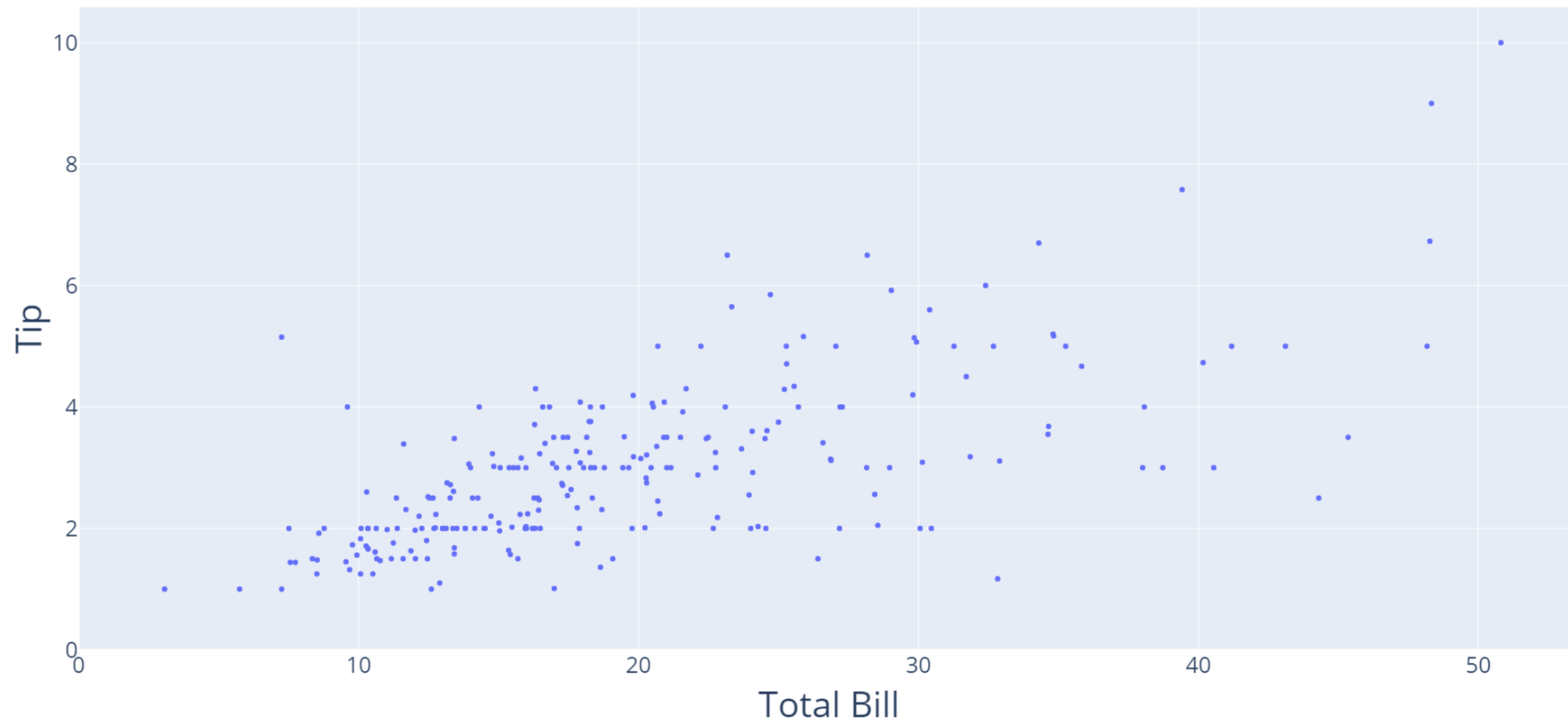
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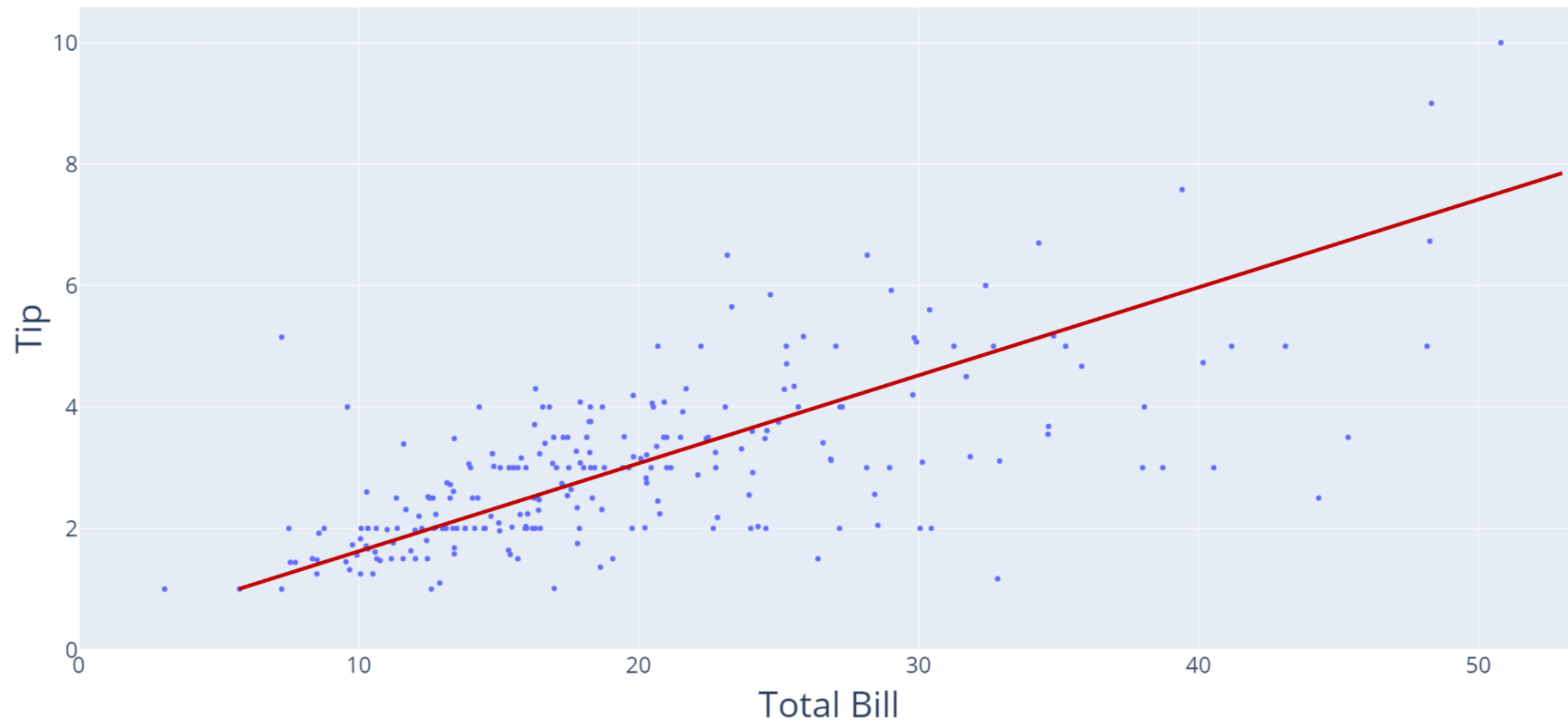
# Interpreting a scatter plot

Tip Amount vs. Total Bill



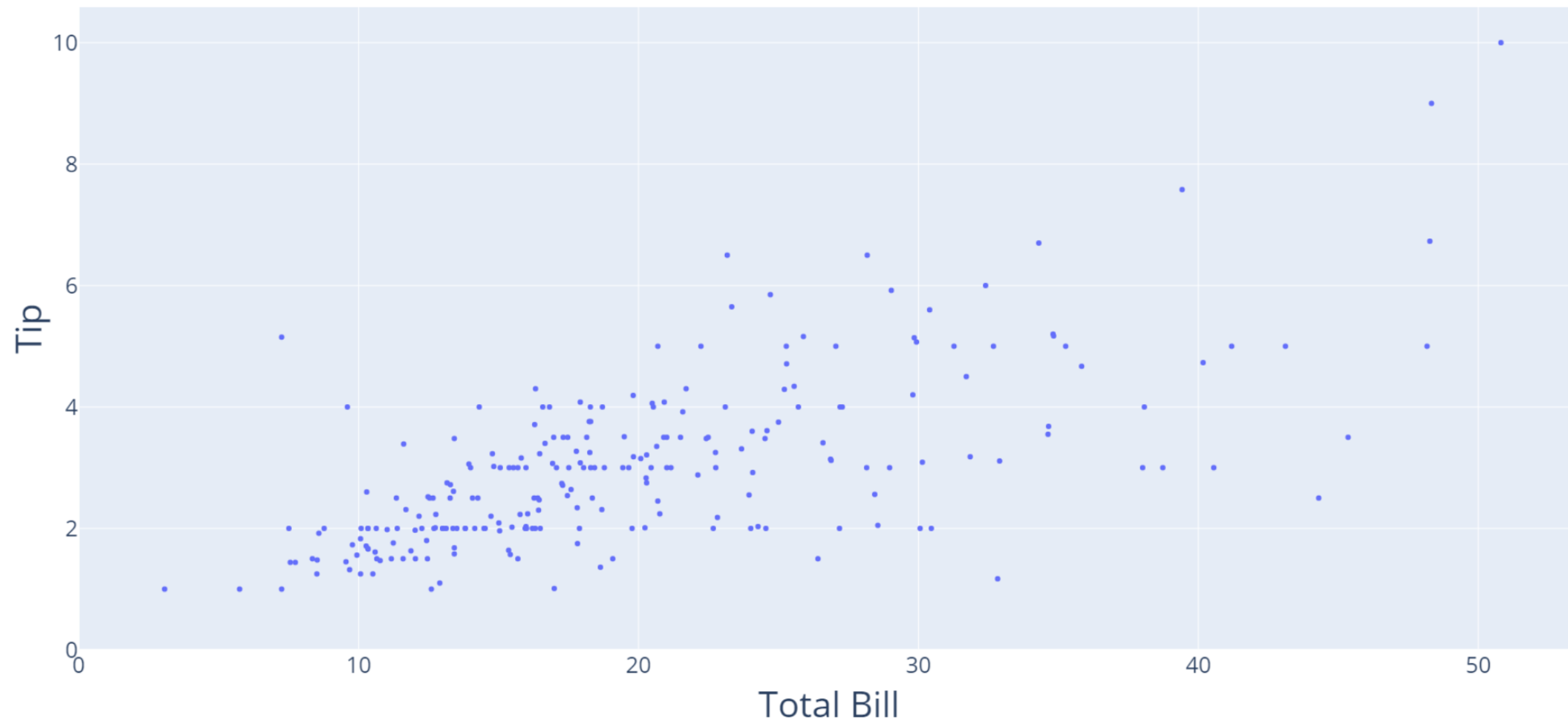
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Tip Amount vs. Total Bill



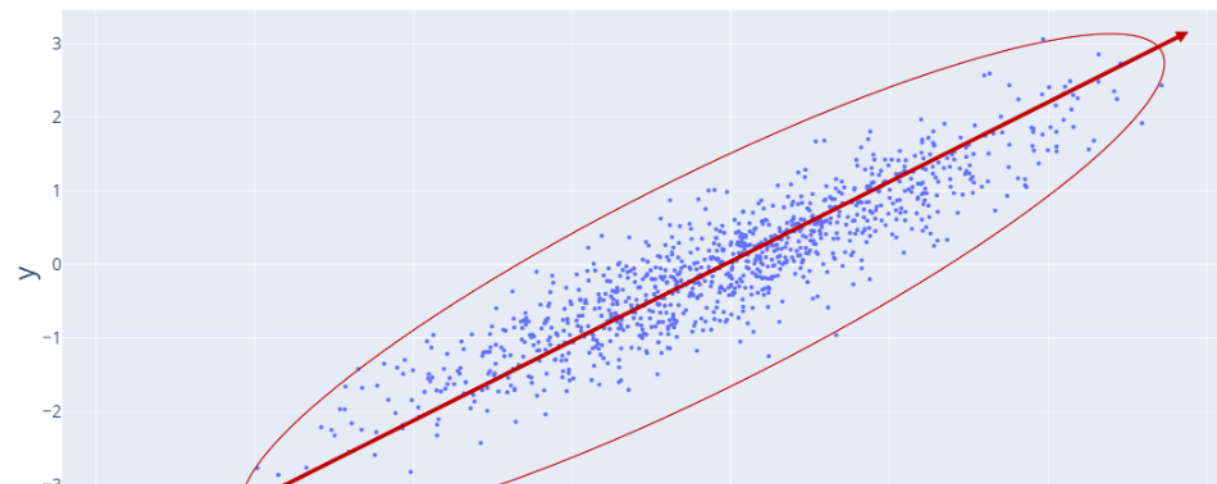
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Tip Amount vs. Total Bill

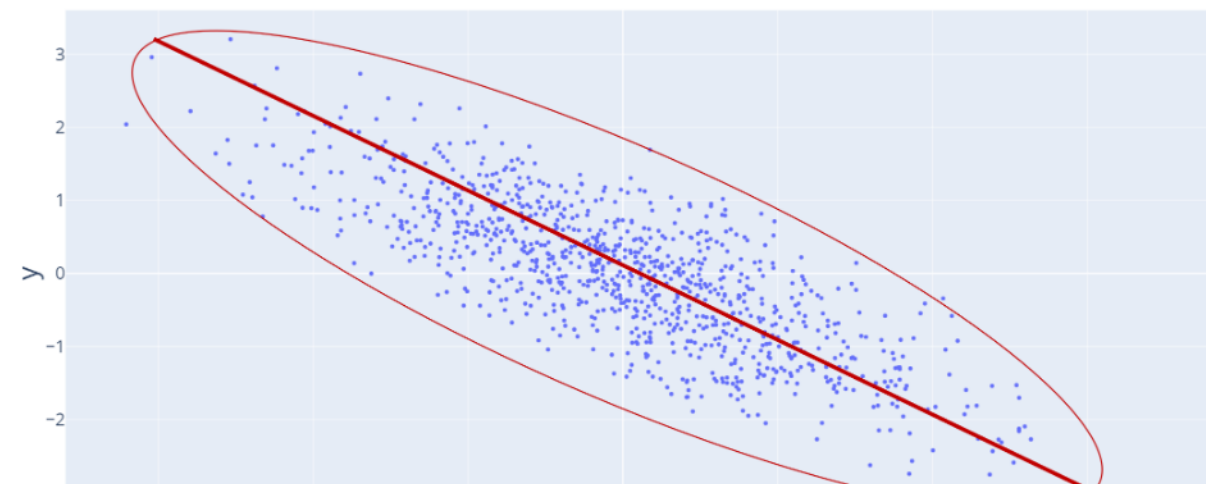


# Interpreting a scatter plot

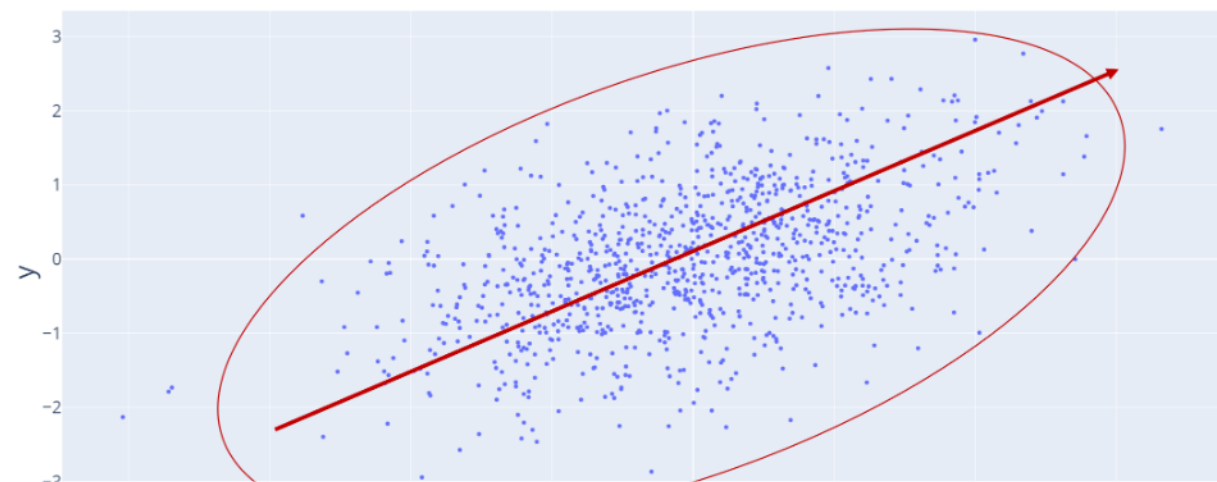
Strong-positive



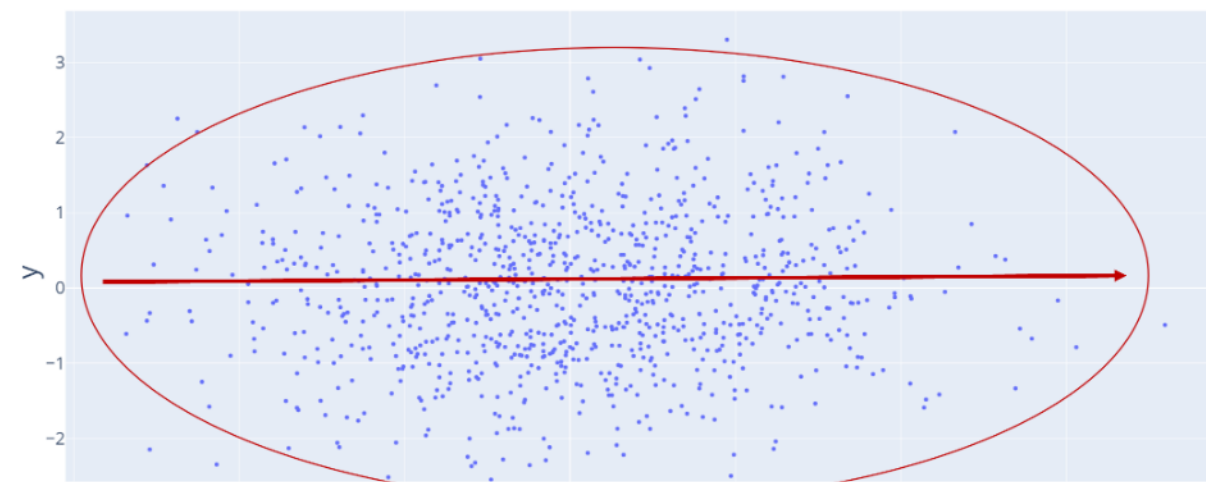
Strong-negative



Weak-positive



No relationship





# Correlation coefficient

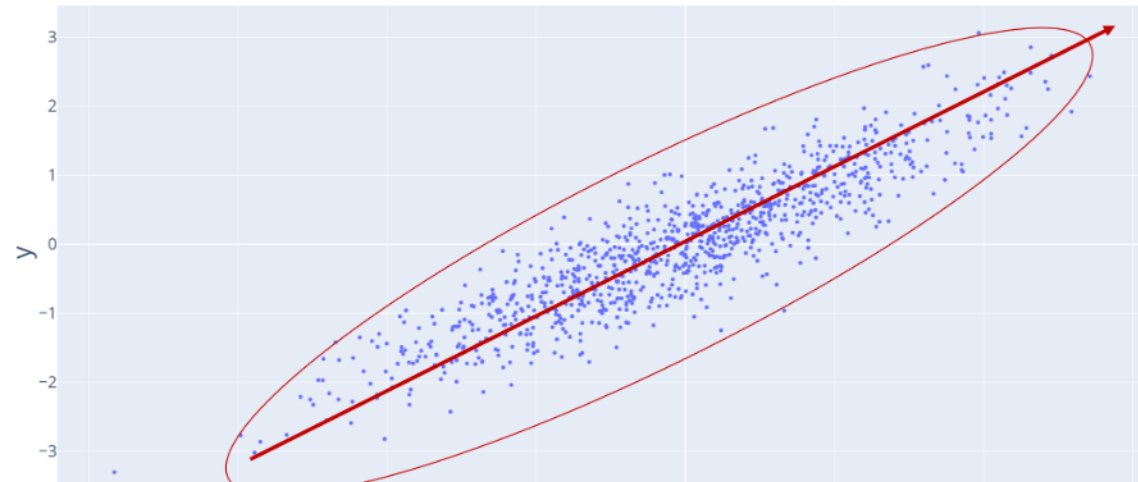
- Used to quantify the relationship
- Represented by the letter,  $r$

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

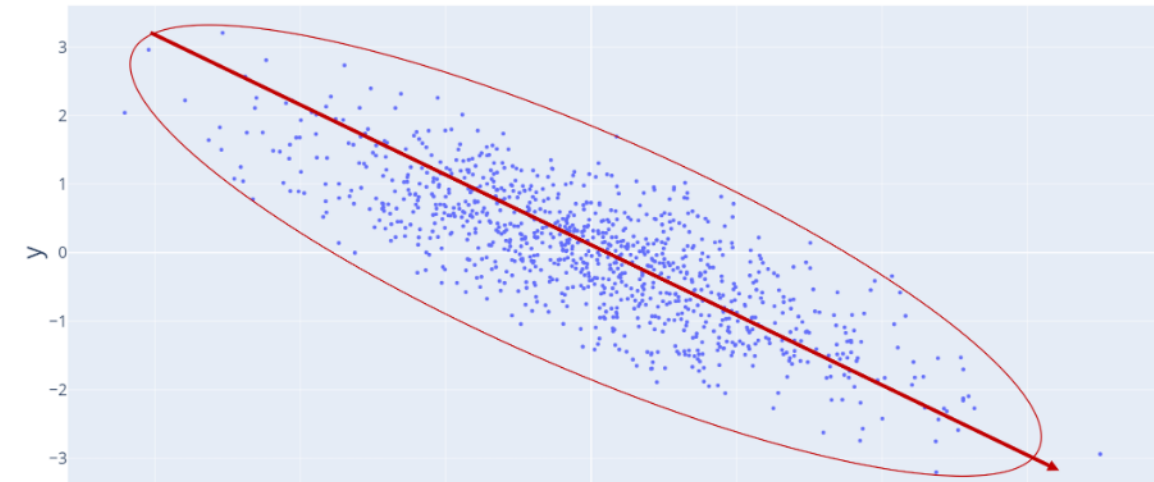
Calculating the correlation coefficient is beyond the scope of this course

# Correlation coefficient and scatter plots

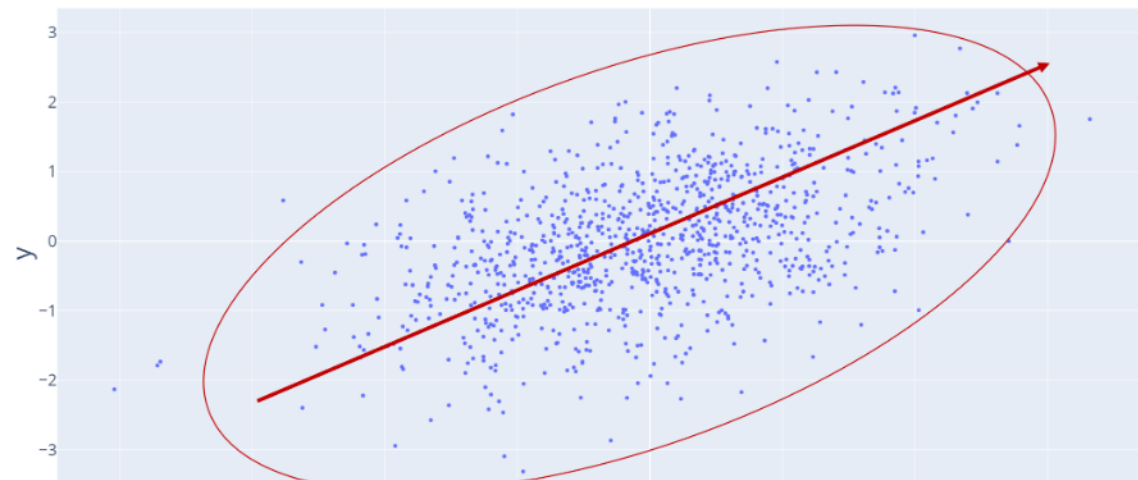
Strong-positive  $r=0.9$



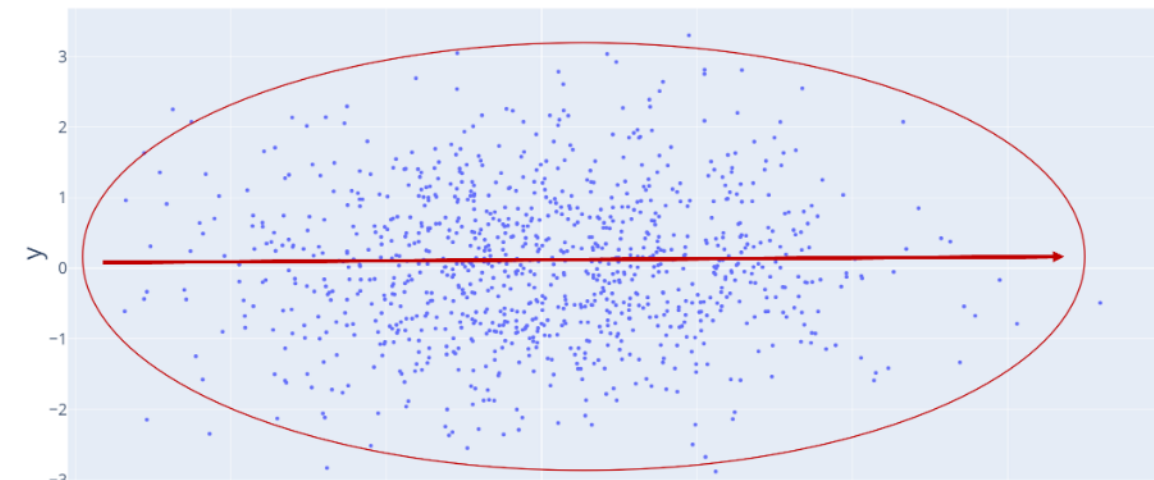
Strong-negative  $r=-0.9$



Weak-positive  $r=0.35$

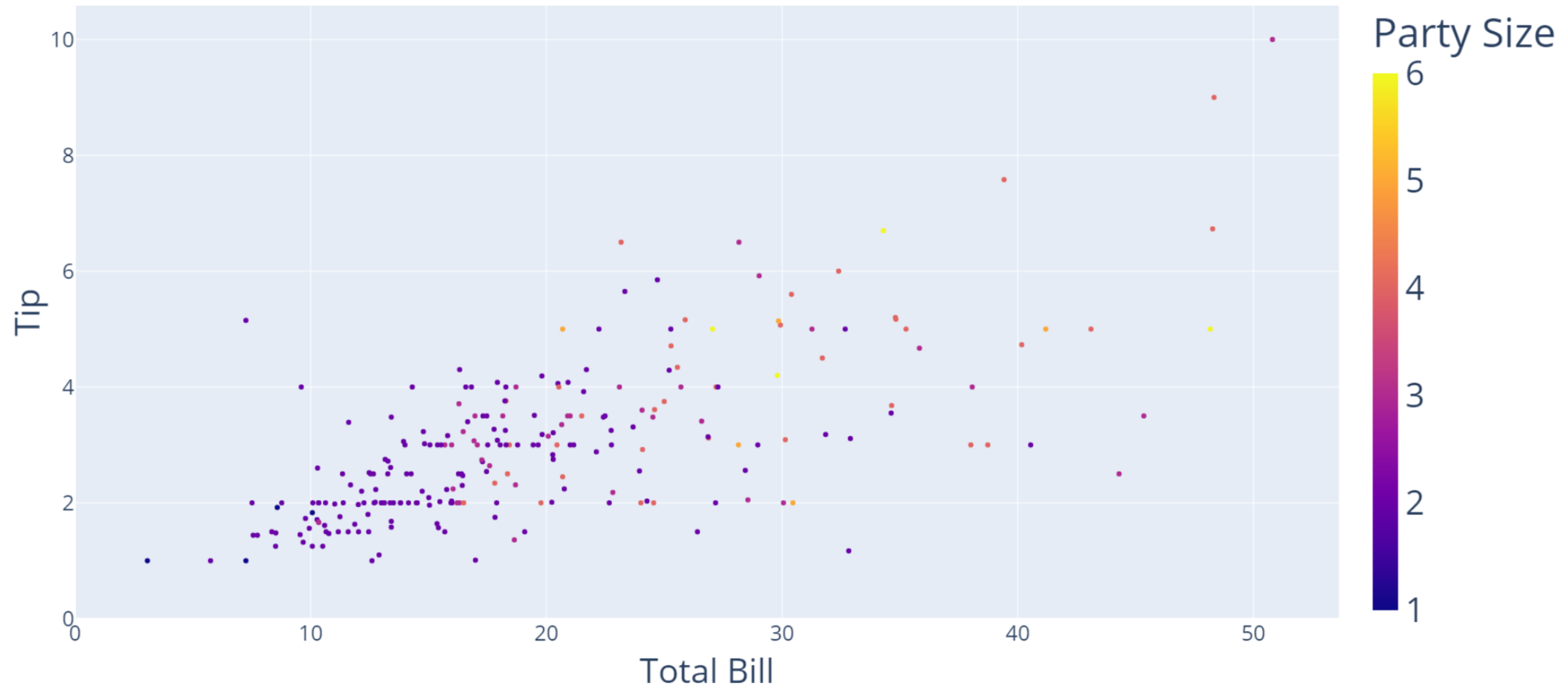


No relationship  $r=0.0$



# Adding context to a scatter plot

Tip Amount vs. Total Bill



# Let's practice!

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# Exploring AirBnB listings with scatter plots

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# Let's practice!

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# Congratulations!

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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!

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