2.2 Relationships Between Two Quantitative Variables (Part 2)

After identifying the explanatory and response variables, it is easy to complete the scatterplot.

How to Make a Scatterplot

1. **Label the axes**. The explanatory variable is plotted on the horizontal axis and the response variable is plotted on the vertical axis. If there is no explanatory variable, either variable can go on the horizontal axis.
2. **Scale the axes**. Put the name of the explanatory variable under the horizontal axis and place equally spaced tick marks along the axis beginning at a "friendly" number just below the smallest value of the explanatory variable and continuing until you exceed the largest value. Do the same for the response variable along the vertical axis.
3. **Plot individual data values**. For each individual, plot a point directly above that individual's value for the explanatory variable and directly to the right of that individual's value for the response variable.

Example: Here are the 40-yard-dash times (in seconds) and long-jump distances (in inches) for a small class of 12 students. Make a scatterplot to display the relationship between 40-yard-dash times and long-jump distances.

Dash time (sec)	5.41	5.05	7.01	7.17	6.73	5.68	5.78	6.31	6.44	6.50	6.80	7.25
Long-jump distance (in.)	171	184	90	65	78	130	173	143	92	139	120	110