SLOPED COMPARISONS

Comparing 2 Linear Regression Systems on Random Data

Process:

1. Generate a **random** set of points
2. Render a trend line for this data set with each regression
3. Repeat this process n times to generate multiple trendlines for each regression

Regression 1:

1. Find the average $\bar{x}$ and $\bar{y}$ and values for a a given random data set
2. Calculate a slope using $\frac{y-y}{y-x}$, for each (x, y) in the data set
3. Take the average of that slope
4. Solve for y-intercept with any random (x, y)

Marked by

Regression 2:

1. For the 5 points at the beginning and end of the dataset, find the average $\bar{y}$ value.
2. Render a line from (0, $\bar{y}_0$) to ($x_f, \bar{y}_f$)

$\bar{y}_0$ is the average y value at the beginning of the dataset

$\bar{y}_f$ is the average y value at the end of the dataset

x_f is final x value in a dataset

Marked by

Comparisons:

Different equations were used to generate the random datasets, to test the effectiveness of these regressions across multiple standards

The vertical range of the points, Δy, was also changed