Intro to Visualization

Lesson Objectives

After this lesson, you will be able to…

- Describe why data visualization is important for communicating results.
- Identify how to select the correct visualization to use based on the data being presented.
- Identify characteristics to clearly communicate through data visualizations.

Teaching Tips:

- Introduce topic and learning objectives
- Pause to take any student questions after reading through the learning objectives

How Do we Make Sense of a Data Set?

We're only looking at 1/3 of this data set! While all the data we need is here, it is difficult to make sense of and draw any meaning from.

Airport	Reason for Delay	Number of Operations	% of Total Operations	Delayed Minutes	% of Total Delayed Minutes
SFO	Air Carrier Delay	28,899	4.85%	1,970,571	30.57%
	Aircraft Arriving Late	37,618	6.31%	2,565,218	39.79%
	Security Delay	165	0.03%	6,716	0.10%
	National Aviation System Delay	34,642	5.81%	1,628,412	25.26%
	Extreme Weather	2,482	0.42%	276,076	4.28%
	Total Operations	596,046	100.00%	6,446,993	100.00%
ATL	Weather	387	27.98%	13,939	26.72%
	Volume	948	68.55%	36,505	69.99%
	Equipment	0	0.00%	0	0.00%
	Closed Runway	47	3.40%	1,665	3.19%
	Other	1	0.07%	52	0.10%
	Total Operations	1,383	100.00%	52,161	100.00%
DEN	Weather	545	66.54%	25,402	76.76%
	Volume	221	26.98%	6,199	18.73%
	Equipment	0	0.00%	0	0.00%
	Closed Runway	49	5.98%	1,376	4.16%
	Other	4	0.49%	115	0.35%
	Total Operations	819	100.00%	33,092	100.00%

Teaching tips: - Note how much more difficult it is to read and make sense out of - Raw data contains a lot of information but isn't digestible or understandable until it is presented in a synthesized way. - The first chart allowed us to compare, draw inferences, and have a clear take-away

So What Is Data Visualization?