How far can you get with data and stats?

PSYC 11: Laboratory in Psychological Science

Jeremy Manning
jeremy@dartmouth.edu

What is the point of this lab exercise?

- We're trying to gain insights into what makes an effective "pitch"
- Relevant to the Introduction section of scientific articles
- Also relevant to presenting/describing your science

What tools do we have to achieve our goal?

- Ratings data
- Analytic tools (stats!)
- Visualization tools (figures!)
- **Our intuitions**

Our dataset

Pitch ratings (W22)

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	A	B	C	D	E	F	G
1	Timestamp	Which group's pitch are y	How CLEAR was the pitc	How INTERESTING was	How EFFICIENT was the	How effective was the chosen FORMAT of the pitch?	
2	4/6/2022 12:59:35	B	10	10	10	10	
3	4/6/2022 12:59:41	B	10	8	10	9	
4	4/6/2022 12:59:51	B	8	10	7	8	
5	4/6/2022 13:00:00	B	6	7	3	3	
6	4/6/2022 13:00:24	B	10	10	10	10	
7	4/6/2022 13:00:25	B	9	10	10	10	
8	4/6/2022 13:00:25	B	8	8	8	9	
9	4/6/2022 13:00:35	B	9	9	7	9	
10	4/6/2022 13:00:36	B	10	10	9	10	
11	4/6/2022 13:00:38	B	7	8	8	9	
12	4/6/2022 13:00:54	B	10	9	7	10	
13	4/6/2022 13:00:56	B	9	8	9	9	
14	4/6/2022 13:00:57	B	10	10	10	10	
15	4/6/2022 13:01:02	B	8	9	8	8	
16	4/6/2022 13:01:03	B	9	9	8	9	
17	4/6/2022 13:01:04	B	9	8	8	10	
18	4/6/2022 13:01:42	B	10	10	8	9	
19	4/6/2022 13:01:48	B	8	10	8	8	
20	4/6/2022 13:01:50	B	8	6	7	8	
21	4/6/2022 13:01:51	B	9	10	9	10	
22	4/6/2022 13:02:02	B	8	6	6	6	
23	4/6/2022 13:02:06	B	8	9	9	9	
24	4/6/2022 13:02:11	B	7	10	9	8	
25	4/6/2022 13:02:24	B	10	10	10	10	
26	4/6/2022 13:02:26	B	8	2	10	8	
27	4/6/2022 13:02:26	B	8	9	9	8	
28	4/6/2022 13:02:26	B	7	8	7	9	
29	4/6/2022 13:02:38	B	9	10	7	10	
30	4/6/2022 13:03:02	B	10	10	8	9	
31	4/6/2022 13:03:03	B	10	10	10	10	
32	4/6/2022 13:15:08	C	10	8	10	9	
33	4/6/2022 13:15:13	C	10	9	8	8	
34	4/6/2022 13:15:15	C	8	10	7	6	

Some things we can do with the dataset

- Make plots to show different groups' ratings
- Run statistical tests

Some things we can't do with (only) the dataset

- Actually know the "truth" about which presentation was best
- Get specific insights into how each pitch could be improved (or what the best parts were)
- Factor in potential sources of bias—presentation order, mood, confounding variables, etc.

Trust your intuitions

- Ultimately, we can't fully discount data if we want to do good science
- But don't throw your intuitions out the window
- Use common sense to help interpret your results, understand limitations of your data/analysis, and figure out what you think is "really" going on
- Communicate your best understanding of the **truth**

Example visualizations and stats