To earn full credit for Journal 12, you must choose one of the following four options.

Option 1

Read the "The Space Shuttle Challenger Explosion and the O-ring" article from Priceonomics (link and PDF available on Moodle). I can't speak to the credibility of this source in general, but for the most part, the statistical explanation is well written.

1. The author asks if you would let the shuttle launch if you knew there was a 1 in 8 chance it would fail. Would you? What about the 1 in 100,000 chance?
2. Describe the first graph (only O-ring failures) in terms of the form, direction, strength, and outliers. Now describe the second graph (O-ring failures and successes) in terms of the form, direction, strength, and outliers. How do the patterns change?
3. Would you describe the O-ring successes as leverage points? Influential points?
4. What are your takeaways from this article?

If you are interested in this story, you can also check out the following pieces:

- NPR, Part 1: 30 Years After Explosion, Challenger Engineer Still Blames Himself
- NPR, Part 2: Challenger Engineer Who Warned Of Shuttle Disaster Dies
- Neftlix: Challenger: The Final Flight

You do not have to read or watch these for the journal! However, if you have the time, I recommend listening to the pieces—you get to hear directly from some of the people who worked on the Challenger, and it's very moving! You can also read the transcript if you like.

Option 2 (Topics: Coronavirus)

Read the "Mass. sees 3,840 new coronavirus cases, 189 new deaths as officials begin reporting 'probable' cases" article from The Boston Globe (link and PDF available on Moodle).

1. When this actually happened, reporting deaths due to probable cases made it seem like there were 189 deaths on one day–in reality, there were only 48 deaths on June 1 (you can visualize this if you look at the graph at the very bottom of the page, paying specific attention to June 1). Though this is not a data entry error, it is an outlier. How do you think the outlier should be handled?
2. Can you think of any other cases where changes in reporting might introduce "outliers" into data?

Option 3

Read the "Telegraph issues correction over Boris Johnson's false UK economy claim" article from The Guardian (link and PDF available on Moodle).

1. Identify the two ways that Boris Johnson extrapolated claims from the OECD economic forecast.

2. Do you think the correction goes too far for a relatively simple error? Do you think the correction goes far enough, given that Boris Johnson is a very public figure in the U.K. (this was before he became Prime Minister, but he was still well known)?

3. What are other ways that people should be held accountable for their use of statistics?

Option 4

Find a news article that relates to a topic we discussed in class and write a brief paragraph on why you think it relates to this week's material.