STAT 165/265 HW 1

Due Jan 28, 2025 at 11:59pm

Please note that if you do not submit this homework (absent extenuating circumstances that you tell us about in advance) you will be dropped from the course.

Logistics Setup

Expected completion time: 10 minutes

Install a time-tracking app as described in the "Predictions" section, and submit a screenshot or photo showing it has been installed.

Deliberate Practice

Expected completion time: 60 minutes

Go to `https://www.openphilanthropy.org/calibration` and sign in (either create an account or use Gmail/Facebook). Click "Home" and complete the following exercises in the app:

- Confidence intervals (level 80%) – at least 20 questions

- 20 questions each from two of the other categories (i.e., two out of PolitiFact, Correlations, City Populations, Math, and Trivia).

(Of course, feel free to answer more questions if you would like!)

At the end, go to the "Results" tab and take screenshots showing that you completed at least 20 questions in each category, as well as your calibration performance (the chart that appears below the results).

Write 1-2 sentences about what you learned from this exercise. For which categories were you most/least successful in being calibrated? Were your confidence intervals generally too big or too small?

Predictions

Expected completion time: 35 minutes

Register the following predictions. You can submit them by going to `https://forms.gle/aUbvh2knS1Z2KkWB6` and by following the form's instructions. Be sure to follow the format described on the front page of the form.

0. Pick a website, application, or software of your choice. Predict how much time (in minutes) you will spend on it between 12:00am Wednesday January 29th and 11:59pm Sunday February 2nd. You should track this **using a time-tracking app** such as Screen Time (if you have macOS Catalina or later), Rescue Time, Digital Wellbeing (Android), or any another tracker you prefer.[1]

1. How many people will be in lecture at 1:15pm on Wednesday, January 29th?

   This will resolve based on a count conducted by the course staff.

2. How many dollars will the movie "Mufasa: The Lion King" gross in the US on the weekend of Jan 31–Feb 2?

   This will resolve based on Box Office Mojo's number for Jan 31–Feb 2 here.

3. Will "Mufasa: The Lion King" be the highest-grossing movie in the US on the weekend of Jan 31–Feb 2?

   This will resolve based on this Box Office Mojo page. Specifically, the question will resolve positively if the entry with row "Jan 31–Feb 2" and column "#1 Release" is "Mufasa: The Lion King," and negatively if that entry is another movie.

For each question, you will submit a mean and inclusive 80% confidence interval (or a probability for question 3) as well as an explanation of your reasoning (1-2 paragraphs).

For questions 1-3, your prediction (but not the explanation) will appear on the public leaderboard. Question 0 will remain private and not count towards the leaderboard.

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[1]Note that some desktop apps record screen time even when an app is open in the background; you might want to be careful about this when making predictions or choosing the application.