

# STAT157 HW 11

April 5, 2023

**Due Tuesday, April 11th at 11:59pm**

## Predictions

*Expected completion time: 90 minutes*

Register the following predictions. You can submit them by going to [this URL](#) and following the form's instructions. For these predictions, (and all predictions about the future throughout this class), we encourage you to use external sources – by googling things, reading news articles, talking to friends who follow politics or music stats, etc.

1. How many students will submit Homework 11 on Gradescope between 11:50pm and 11:59pm on April 11th?<sup>1</sup>
  - This question will be resolved with a course staff count according to the Time (PDT) submitted column on the staff Gradescope interface.
2. What will be the ratio of the Google trends interest of “crime” to “layoffs”, during the week of April 16th - April 22nd?<sup>2</sup>
  - This question will be resolved on April 23rd at 11:59pm, according to [Google trends](#) with parameters set to “US”, “All Categories”, and “Web Search”, by dividing the interest for crime for April 16th-April 22nd by the interest for layoffs for April 16th-April 22nd. (E.g., this would have resolved as 3.2 for the week of March 19th - March 25th.)
3. On April 30th, what will be the average queries per hour that users have access to on GPT-4, using the \$20/month subscription, rounded to 2 decimal points?
  - This question will be resolved, on April 30th at 11:59pm, according to GPT-4's reported queries permitted at the bottom of the chat API, rounded to 2 decimal points. If this number is no longer written at the bottom of the chat API because of UI changes, then it will be resolved according to documentation where this number is provided. (E.g, on April 5th, this would have resolved to 8.33.)

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<sup>1</sup>Thanks to Kaixin Lei for suggesting a related forecasting question and inspiring this question.

<sup>2</sup>Thanks to Rahul Shah for suggesting a related forecasting question and inspiring this question.

For each question, submit an inclusive 80% confidence interval as well as an explanation of your reasoning (1-2 paragraphs). **Please include a copy of your google form responses with your Gradescope submission.** On Gradescope, please also submit the time it took to complete this exercise.

## Extra Credit

You can earn extra credit for doing the following task:

1. (2 points). Propose a prediction question for a future homework. Your question should have a fully specified resolution criteria, such that it would be clear to the course staff how to resolve it.

You will get extra credit if we either use your question on a future homework, or like it enough to add it to our question bank for future classes.