STAT 165/265: Forecasting

Inner Game of Forecasting

2/14/2025

You will work through this sheet in class on Friday, 2/14 in groups of 2-3. In the first question, you'll place different statements on a 'likelihood thermometer' based on how intuitively likely they feel. In the second question, you'll reflect on your past forecast on one of the homework problems and discuss with your group.

Please submit the Discussion sheet for participation points on Gradescope under the "Discussion 4 Worksheet" assignment. Submit what you have at the end of the hour – it's ok if you didn't finish every question thoroughly!

For students who have contacted us about absences this Friday, please spend an hour on this sheet and submit to the same Gradescope assignment.

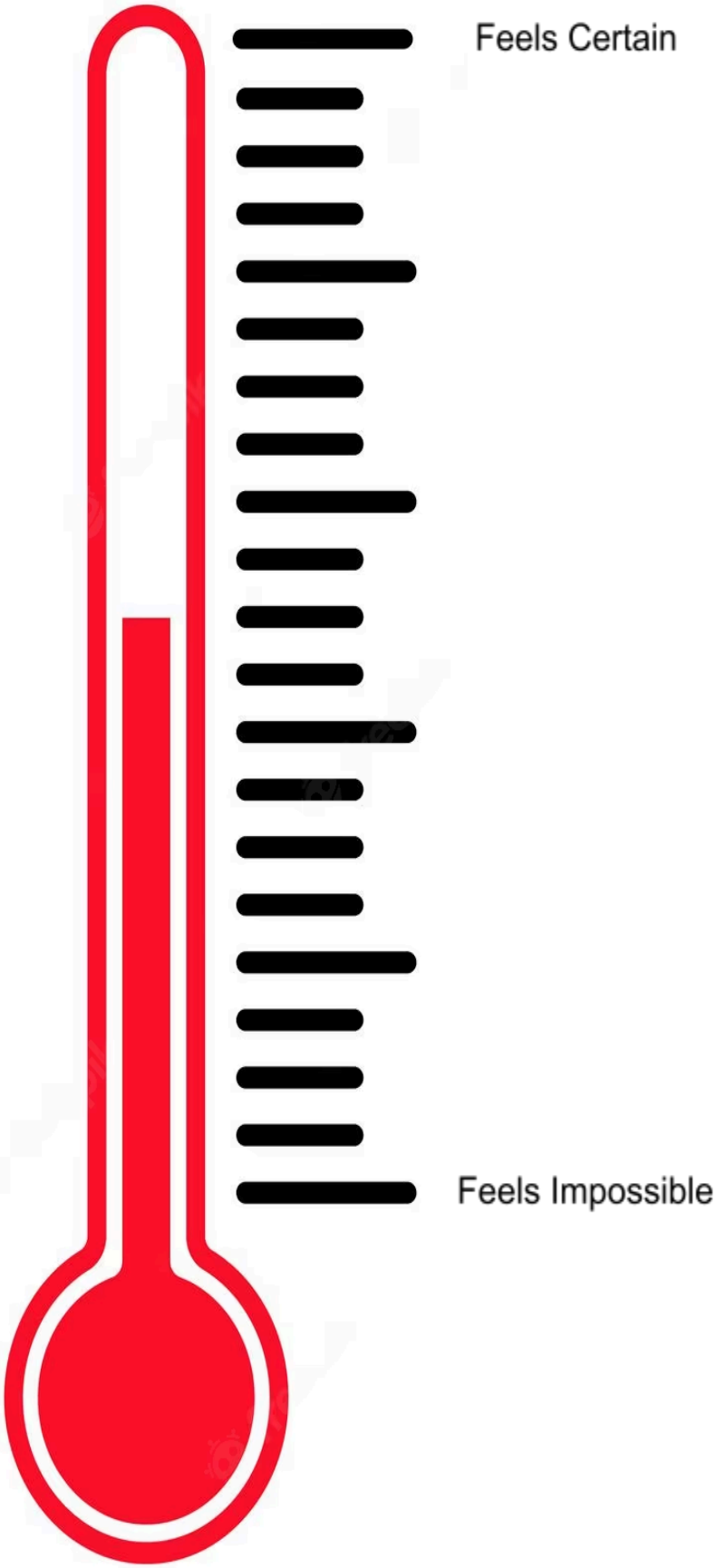
Q1: "Likelihood Thermometer" (20 minutes)

1. (5 minutes) For statements a-h, place them on the thermometer on the next page based on how confident you feel that they are true, without consulting other group members. Do not spend a long time trying to estimate probabilities, instead place them based on **how likely they *feel* compared to the other statements**. Try to spend at most 20 seconds on each.

a. The sum of 29 and 32 is 61
b. Conakry is the capital of Guinea
c. 57 is a prime number
d. A typical apple contains fewer than 50 calories
e. There have been 7 seasons of Game of Thrones
f. Phoenix has more inhabitants than Philadelphia
g. The Kansas City Chiefs will win the 2025 Super Bowl
h. Beyoncé has sold more records than the Beatles

2. (15 minutes) For each statement i-p, place it on the thermometer, then compare with the other members of your group. Which statements did you have different intuitions about?

i. Sweden is a monarchy
j. Mawil will be present in class during the next lecture
k. The Aztec Empire is older than Oxford University
l. Cleopatra lived closer in time to the building of the Egyptian pyramids than to us
m. Bronze is an alloy of copper and zinc
n. A bee has more synapses than ChatGPT has parameters
o. It will rain in Berkeley at least once over the next 5 days
p. A Tesla Model 3 can drive from SF to LA without needing to recharge batteries


Feels Certain
Feels Impossible

Q2: Forecasting retrospective (20 minutes)

Consider the following question, from HW2:

> What will the RSF Weight Room Crowd Meter read next to "% Full" on Wednesday, February 5 at 8:30am Pacific Time? To clarify, we are interested in the number for "Weight Rooms" not for "CMS Fitness."

The answer to this question was **76**. With your group members, look back on your forecast and reasoning.

1. (10 minutes) In line with the reading, try to distinguish what went right and wrong across **different sub skills**. For example:

- Maybe you found a good decomposition of the question, but had a poor estimate for one of the intermediate quantities
- Maybe your point estimate was good but your confidence interval was too wide
- Maybe you neglected some key considerations
- Maybe you over relied on a particular method (e.g. a first order approximation) or a particular base rate

2. (10 minutes) Focus more specifically on how you **quantified your uncertainty**, i.e. how you chose the width of your confidence interval:

- What considerations did you use to come up with your upper and lower bound?
- Did the other group members proceed differently?
- Given a new forecasting question, how would you do differently? What signals would tell you to do things differently?