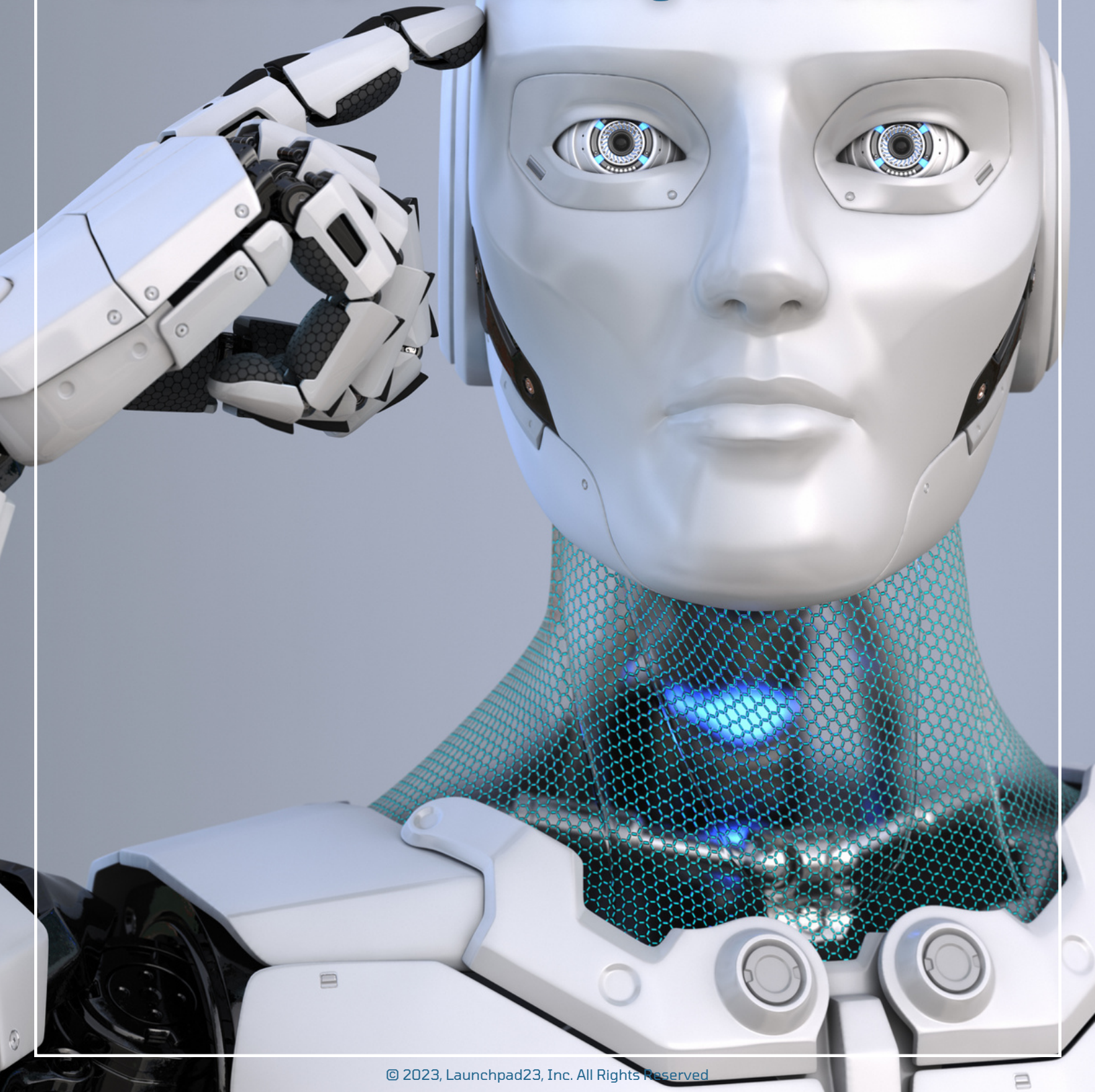# FORECASTING

The Art of Predicting the Future

FORECAST

From time immemorial, forecasting has been a critical skill, sometimes with life and death implications.

For example, correctly predicting the weather could mean the difference between having food necessary to survive winter, or not.

Forecasting isn't just about the weather, however. People good at forecasting economic trends, for example, succeed financially. Forecasting disease outbreaks helps the medical field prepare for surges.

Every aspect of our lives benefits from forecasting, so let's explore and improve your ability to thrive as a forecaster in whatever fields ignite your curiosity.

- Forecasts (Wikipedia)
- Superforecaster (Wikipedia)

11X17 PAPER
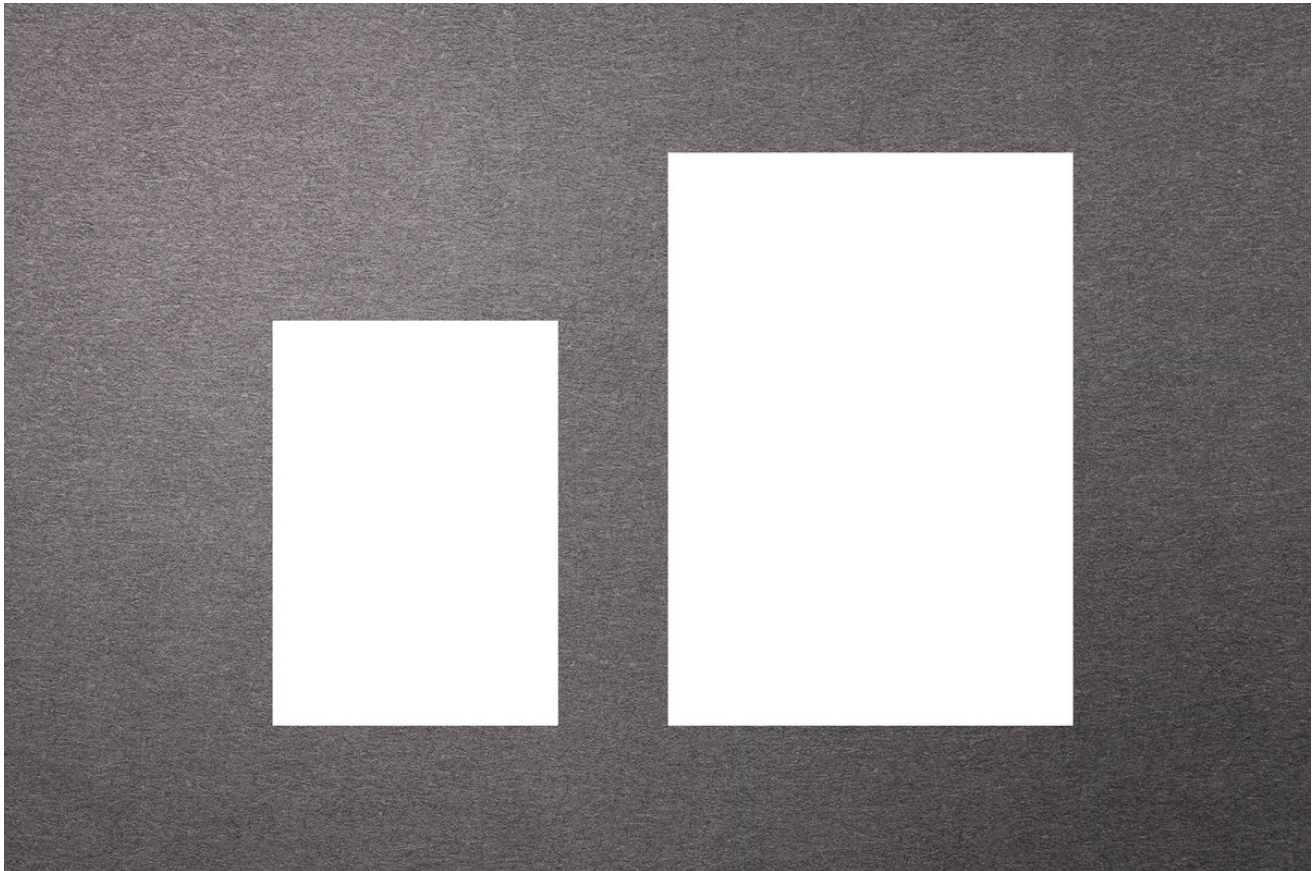
If you have it, **grab 11x17 paper.** Your ideas need space!

The great thing about 11x17 paper, also known as ledger paper, is that it has the nifty attribute of being a normal-sized page when folded in half, for easy storage of your big ideas. Grab a few sheets, and let your ideas run wild!

EXAMPLES

It is easy to think of weather-related forecasting examples, but take a moment to **brainstorm examples of forecasting from your interest areas.** Work with a team, if you have one.

Take the exercise to the next level by thinking about what types of information would inform the forecasts, and what resources would be required from a time, human resources (people), and cost perspective.

HANDS ON

Pick a question from your areas of interest that you would like to forecast. Now, think about the tree below.

The roots are the data, information, experiences, and knowledge you have, or need, to do your forecasting. The trunk is the question you want to forecast, and the branches are the possible future outcomes.

Your job is to figure out which branch is the most likely. Are you ready to try it out?
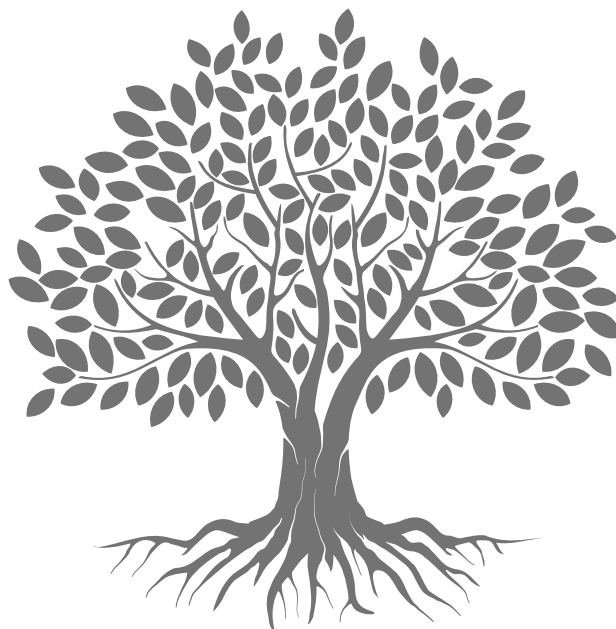
ROOTS

Brainstorm the roots of your question below.

- What information is already available that could help inform your forecast? Do you have access to it?
- What related topics could impact your forecast?
- What information do you wish you had, and what would it take to get it?

TRENDS

Watching a seismometer when there isn't an earthquake would be boring after a while, as the needle would remain static, drawing a straight line.

Even if the seismometer has drawn that straight line for *years*, does that guarantee that tomorrow it will continue the straight line?

The obvious answer is no, but humans sometimes have a hard time remembering that, and so much so that the U.S. Government requires investment companies to remind people that "past performance is no guarantee of future results."

Think about the key trends and indicators that can inform your forecast. How can you track these trends and indicators? Would there be early warning signs of a change in trajectory? Are they trends that will change often, or will they be like the seismometer, where by the time you see a change, it is already upon you?

BRANCHES

Brainstorm the branches (future possibilities) below.

- What could happen if key trends and indicators don't change (put those in the center)?
- What could happen if key trends and indicators change for the better (put those on the right)?
- What could happen if key trends and indicators change for the worse (put those on the left)?
- Did you identify new information requirements?
- Which forecast is most likely, and why?
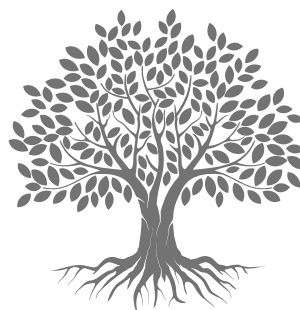
TOOLBOX

Can you ever be 100% confident in your forecast? Of course not, and it is important to communicate the uncertainty inherent in every forecast, to minimize the chances of someone using the forecast irresponsibly.

A simple way to communicate analytic confidence is to use a low / medium / high rating.

What confidence do you have in your forecast? What information would make you more confident in your forecast? What are the "it depends" factors that will influence the accuracy of your forecast?

TRADEOFFS

Due to the uncertainty inherent in our lives, it is *hard* to get a forecast right every time. To increase our chances of success, we need time and information, but sometimes those are costs we cannot afford.

For example, sometimes you will be asked to come up with a forecast *quickly*, and you will not have time to get all the information that would make the forecast *better*.

We call this a tradeoff, and again, it is important to communicate what tradeoffs impacted your forecast. It is also important to learn from our tradeoffs, so that where possible, we set up systems to reduce the time we need to conduct the thorough analysis that makes our forecasts better.

CHALLENGE

Now it is time to put your forecasting skills to the test.

- **Goal.** Come up with as many correct forecasts as possible in the time allotted.

- **Bounding.** The forecasts must be for the upcoming one-month period.

- **Caveat.** The forecasts must be for things that you can validate. For example, you will not get credit for "somewhere a comet will pass by a planet" unless you can prove that it happened.

- **Scoring.** You / your team will receive one point for every forecast that proves correct over the next month, and lose a point for every one that does not.

- **Think.** The more guesses you make, the more likely some will be right, but overly quick forecasting could cost you, as well. Also, think about how the concept of <u>division of labor</u> can help you / your team . . .

CAUTION

Remember that this exercise is just a piece in the analytical puzzles that people play with every day, often with very real consequences.

- *How you use forecasts matters, including whether you spend the time to learn from your failures.*

- *How you hedge and preserve optionality matters.*

- *How you do <u>trend analysis</u> matters.*

- *How you set up a culture where people feel free to challenge assumptions matters.*

- *How you <u>intentionally subject analysis to rigor</u> matters.*

We'll explore additional tools and approaches to help you manage these and other issues in future sessions, but for now, track your forecasts and get learning!

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