

Constructing Quantitative Arguments

(Professor Dave)²

The University of Austin

You are confronted with a difficult question with many moving parts and possible outcomes.

How do you effectively answer this question, acknowledging the complexity, uncertainty, and trade offs involved?

Are medical schools discriminatory in admissions?

Are police racist?

Is private space travel the best way to become a multiplanetary species?

Is the stock market predictable, and if so, to what degree?

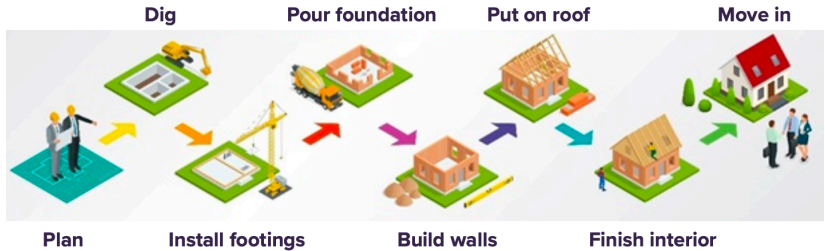
Will increasing the minimum wage help or hurt the economy?

Is this vaccine safe and effective?

Should I propose to a fellow UATX student?

Should I ~~propose to~~ ask out a fellow UATX student?

An analogy: Building a house



There's only one way to manage something so complex:

- **Break down** the complex task into simpler tasks
- **Sequence** the tasks so that each one builds on prior tasks and feeds into subsequent tasks

An analogy: Building a house

A quantitative argument is built from sequencing simpler tasks

- Framing the question
- Building a model
- Gathering data
- Making defensible assumptions
- Probing the model's outputs

Is college worth it?