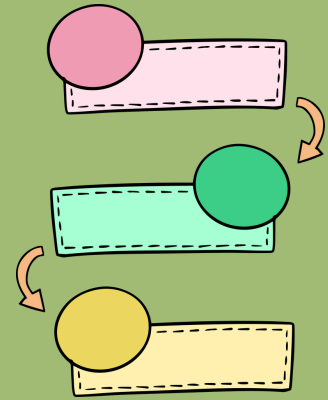


Develop and qualify hypotheses



How to do it

This three-step guide presents one possible approach to using generative AI to develop and refine a hypothesis.

1. Define the scope of your investigation

Choose a topic or problem that you would like to investigate. Draw on your existing subject knowledge, relevant theories, previous research, or an observation that has sparked your interest. Try to define:

- the phenomenon you want to investigate
- the relationship or difference you are interested in
- the key concepts or factors involved
- the context in which the hypothesis should apply

It can be helpful to formulate a preliminary hypothesis or some possible explanations before involving the chatbot. This makes it easier to use it as a sounding board rather than leaving the idea generation to it.

2. Explore different possibilities

Give the chatbot relevant information about the topic, the subject context, and the factors you are considering. Then ask it to help you explore several possible hypotheses or perspectives.

For example, you can ask the chatbot to:

- suggest different possible relationships
- formulate alternative explanations
- challenge your assumptions
- propose a counterhypothesis
- point out factors that may affect the relationship
- explore how the hypothesis can be scoped or made more precise

Do not use it only to confirm your first idea. Use the chatbot to open up the field and explore which other explanations may be relevant.

3. Assess and refine the hypothesis

Examine the suggestions critically, and select only those that are academically relevant. A hypothesis may sound convincing without being grounded in existing knowledge or being possible to investigate in practice.

Consider, among other things:

- Is the hypothesis clear and sufficiently focused?
- Is it academically well-founded?
- Can it be investigated using relevant data and methods?
- Are the key concepts or factors clearly defined?
- Are there plausible alternative explanations?
- Is the investigation feasible in practice and ethically sound?

Verify academic claims and references using trustworthy sources. Then formulate the final hypothesis yourself so that you can explain and justify the choices on which it is based.



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