Module 3
Combining Data Storytelling and AI

AI

Tailor the story
to a specific audience

Evaluate the story quality

AI

Tailor the story
to a specific audience

Evaluate the story quality

We **won't** see how to use AI to extract an insight from data.

This could be the focus of another tutorial!
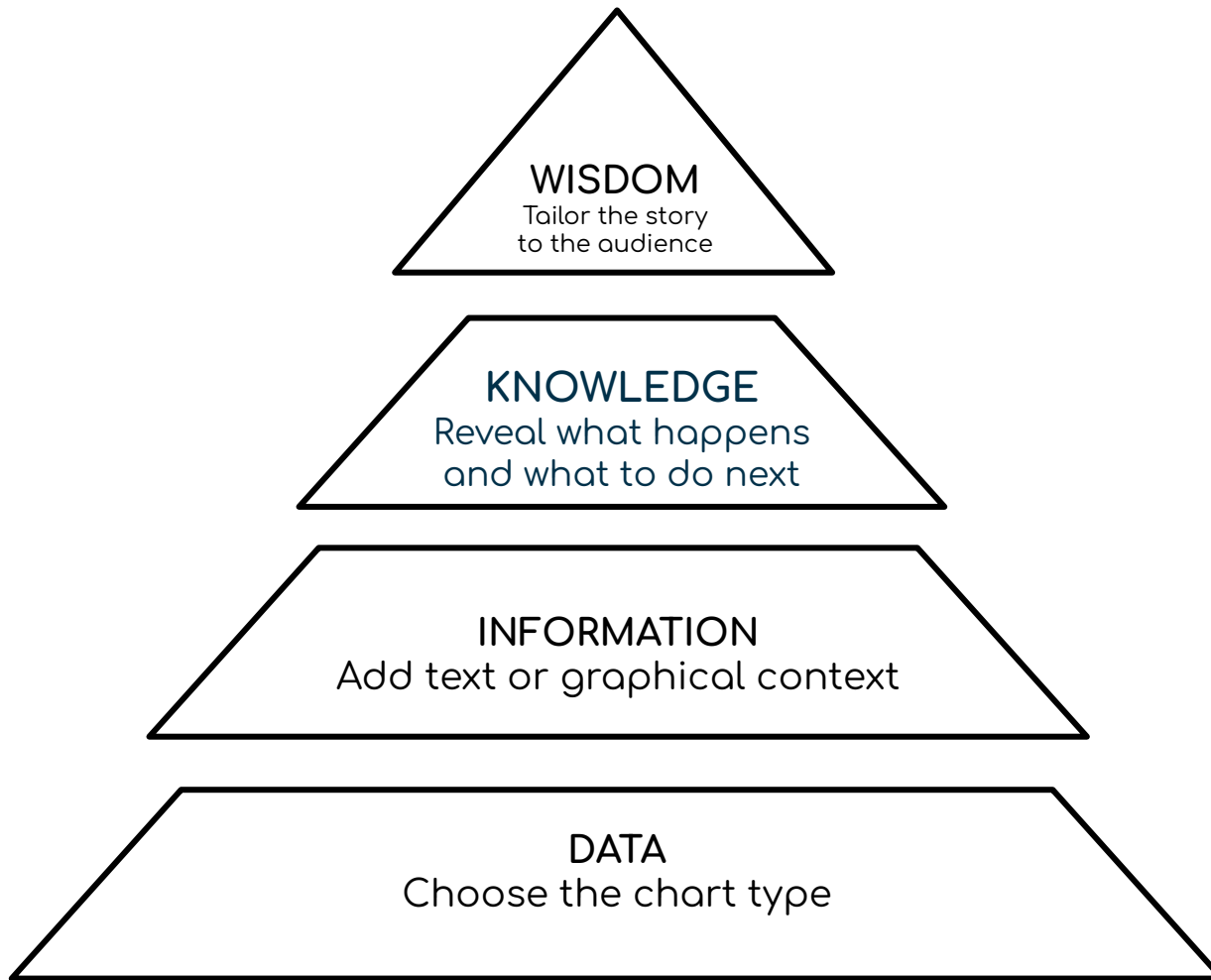
AI is a human assistant,
not a human replacer.

Based on your audience, you will choose an appropriate

Language and Tone

The set of words (language) and the emotional expression conveyed through them (tone)

Context

The level of details to add to your story, based on the cultural sensitivity of the audience
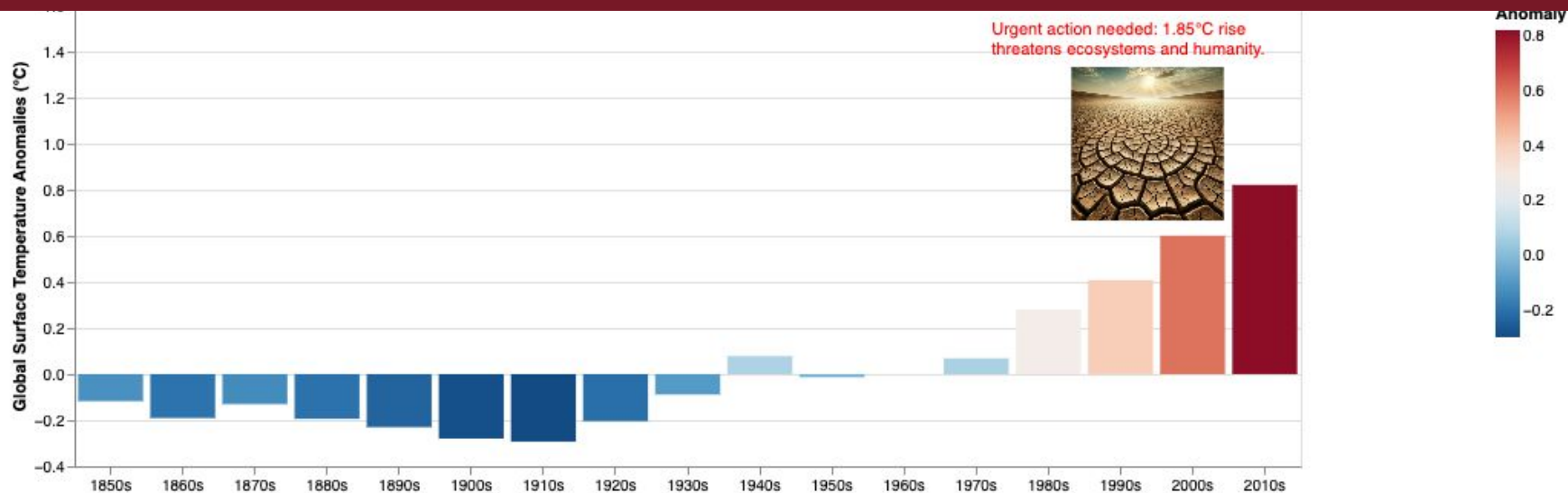
WISDOM
Tailor the story
to the audience

KNOWLEDGE
Reveal what happens
and what to do next

INFORMATION
Add text or graphical context

DATA
Choose the chart type

Data

Use AI to help choose the best chart or directly build the chart.

Understanding Global Temperature: A Crucial Metric for Climate Action

Global temperature is a vital indicator of climate health, calculated using surface, satellite, and ocean data.
Accurate yearly measurements are essential for informed decision-making and effective climate policies.

Urgent action needed: 1.85°C rise threatens ecosystems and humanity.

Expand solar, wind, and geothermal energy!

Use AI to propose the best chart for a given audience

Act to inform a general audience. What is the best chart to show the audience a trendline about temperature increase, and why?.

To inform a general audience about a temperature increase trend, the best chart is a line chart. Here's why:
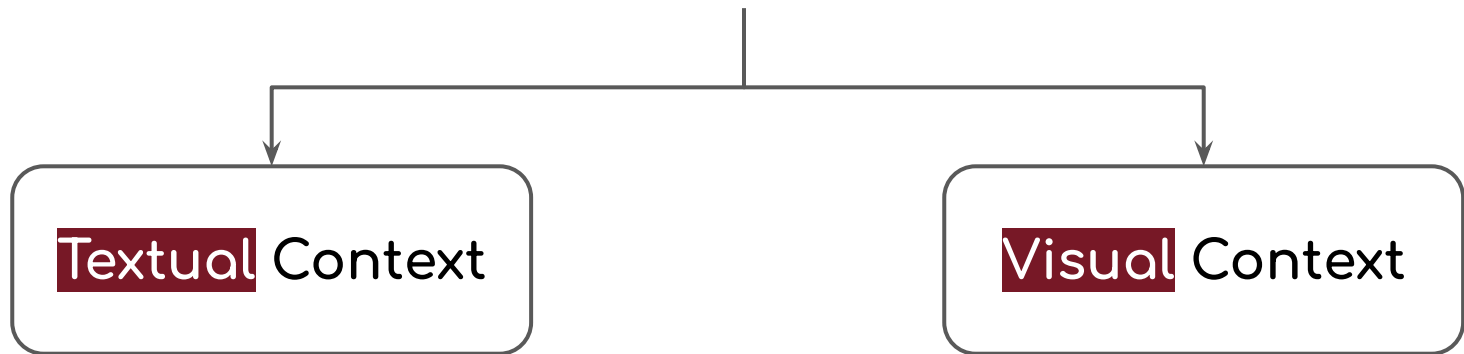
Shows Trends Over Time Clearly
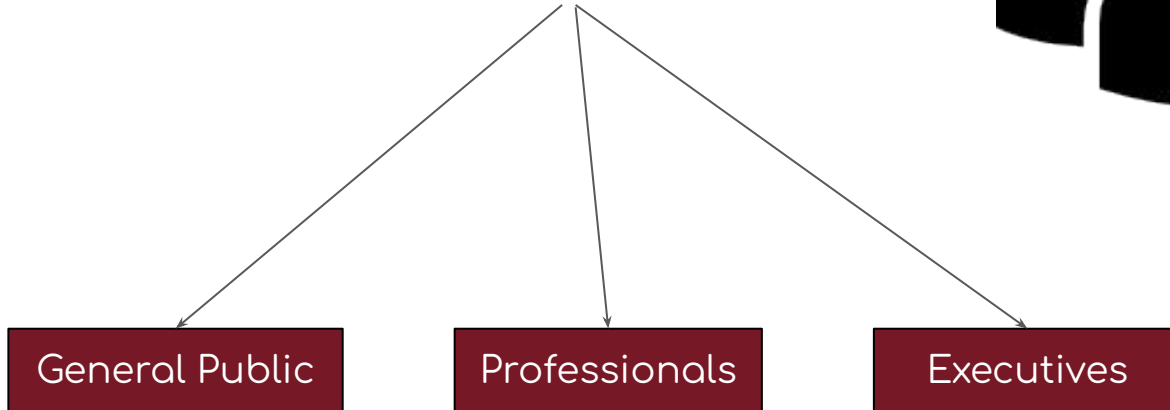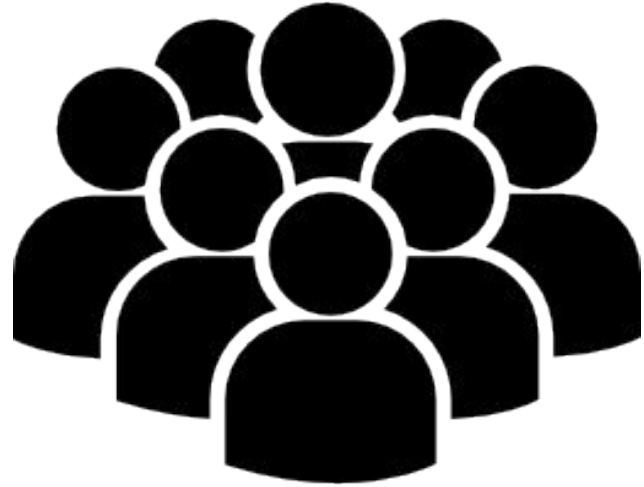
Simple and Intuitive

…

Information

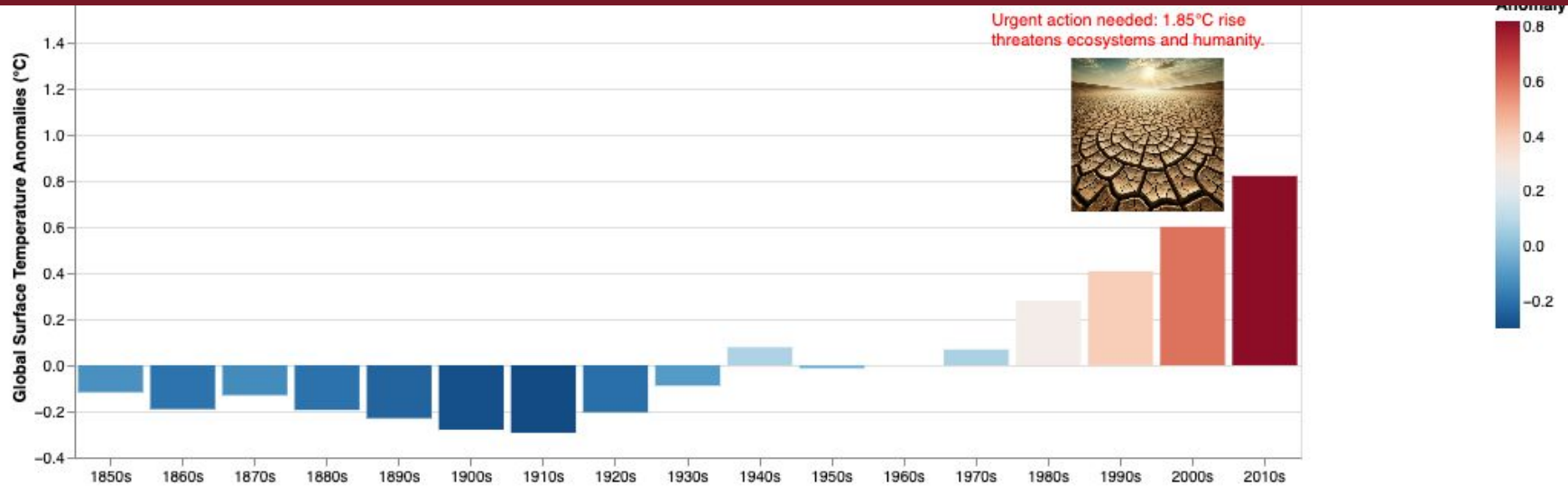Use AI to tailor context to a specific audience and for a specific goal

Textual Context

Visual Context

You always tell a story to an **audience**

| General Public | Professionals | Executives |

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Tailor the Context for the <mark>General Audience</mark>

Act to inform a general audience. Write a title and a commentary of 30 words about the following topic: describe the concept of global temperature and how it is calculated yearly.

Title: Understanding Global Temperature and Its Yearly Calculation

Commentary: Global temperature represents Earth's average surface temperature. Scientists calculate it annually using data from land and ocean sensors worldwide, averaging readings to track climate trends and global warming effects.

Tailor the Context for the General Audience of Italians

Act to inform a general audience of Italians. Write a title and a commentary in English of 50 words about the following topic: describe the concept of global temperature and how it is calculated yearly using an example related to the Italian cuisine.

Title: Understanding Global Temperature Through Italian Cuisine

Global temperature represents the Earth's average heat level, calculated yearly from worldwide measurements. Imagine making a perfect Italian pizza: balancing ingredients (temperature data) from different regions ensures consistency. Similarly, scientists average global climate data to assess changes, guiding actions against global warming, much like adjusting a recipe for perfection.

Tailor the Context for Professionals

Act as to inform professionals, i.e., experts in the environment domain. Write a title and a commentary of 30 words about the following topic: describe how the global temperature anomaly is calculated yearly, detailing the formula.

Title: Annual Calculation of Global Temperature Anomaly: Methodology and Formula

Commentary:

The global temperature anomaly is derived by comparing annual temperature averages to a baseline climatology (e.g., 1951–1980). The anomaly is calculated as:

$$T_{\text{anomaly}} = T_{\text{observed}} - T_{\text{baseline}}$$

where T_{observed} is the global mean temperature for a given year and T_{baseline} is the long-term average. This approach highlights deviations, crucial for climate trend analysis.
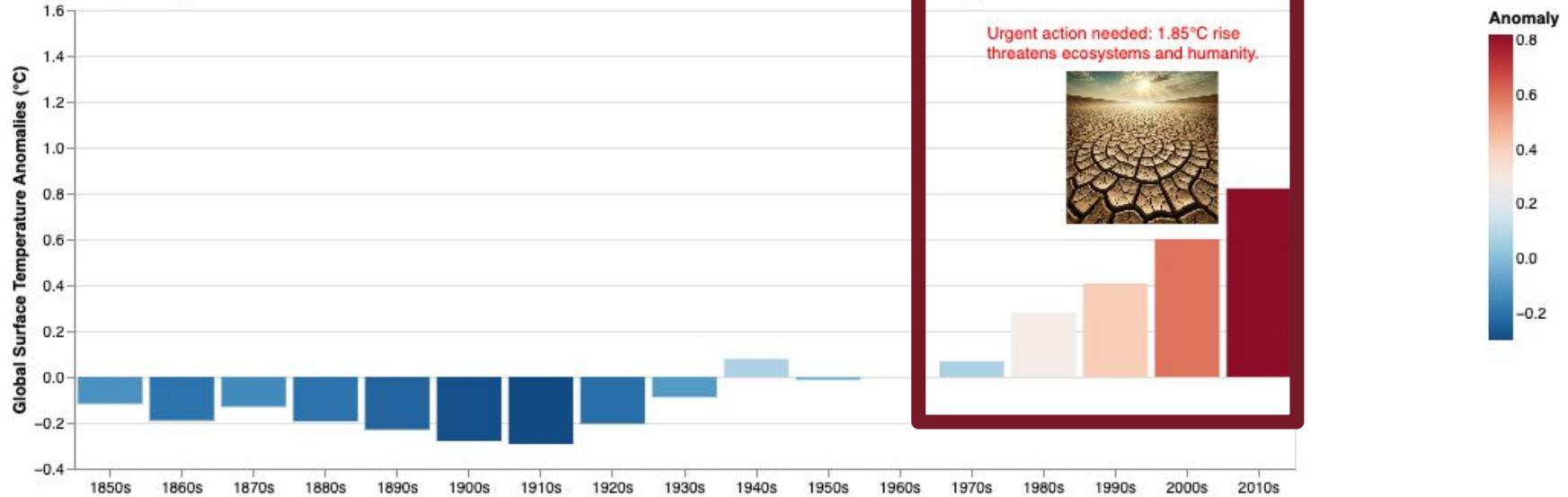
AI is your assistant, not your replacer.

You control the story. AI helps you.

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Use AI to refine the insight communication

Add a textual commentary for reference year 1960 shorten it tailor to professionals who want to know data
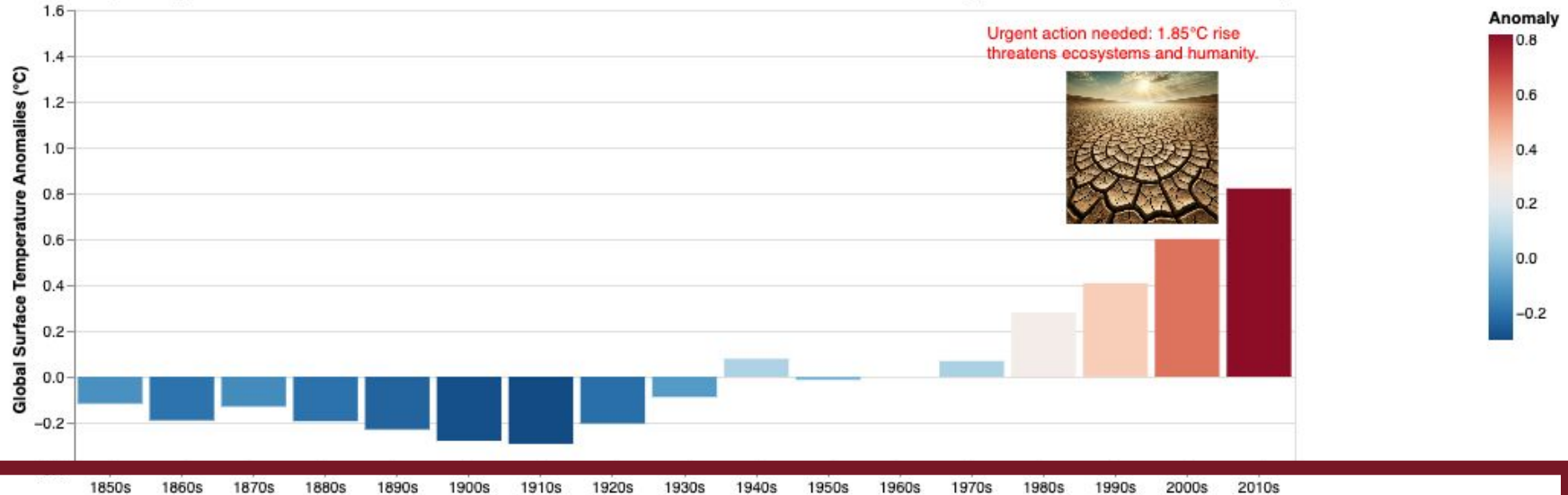
Commentary (1960 Reference Point):

"1960 marks a critical inflection point—global mean temperatures begin to diverge more consistently from the 20th-century baseline. This year serves as a reference for early anthropogenic warming signals becoming more detectable in the observational record."

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Wisdom

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Global Surface Temperature Anomalies (°C)

1850s 1860s 1870s 1880s 1890s 1900s 1910s 1920s 1930s 1940s 1950s 1960s 1970s 1980s 1990s 2000s 2010s

Anomaly

Expand solar, wind, and geothermal energy!

Wisdom

Use AI to propose
some possible ideas of calls to action

Propose possible strategies for Professionals

Elaborate a strategy on what professionals can do with this data about temperature increase

The more precise you are in defining your audience the more focused the results will be.

AI could hallucinate.
AI could generate biased content.

Control results
Use fine-tuning
Use Retrieval Augmented Generation

Use AI as your **augmented** brain, not as your only brain.

Now it's time to practice!