

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.

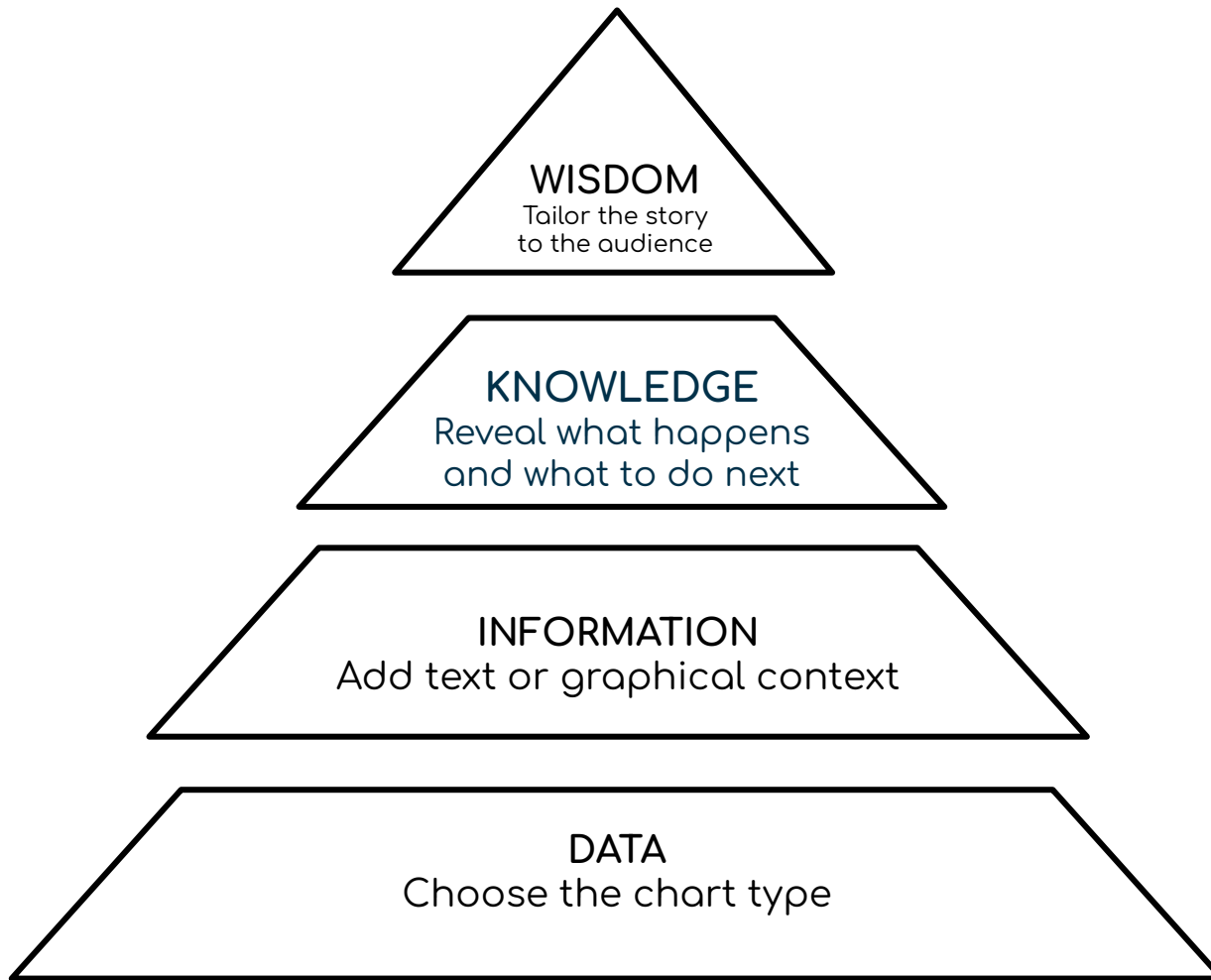
Based on your audience, you will choose an appropriate

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



Data

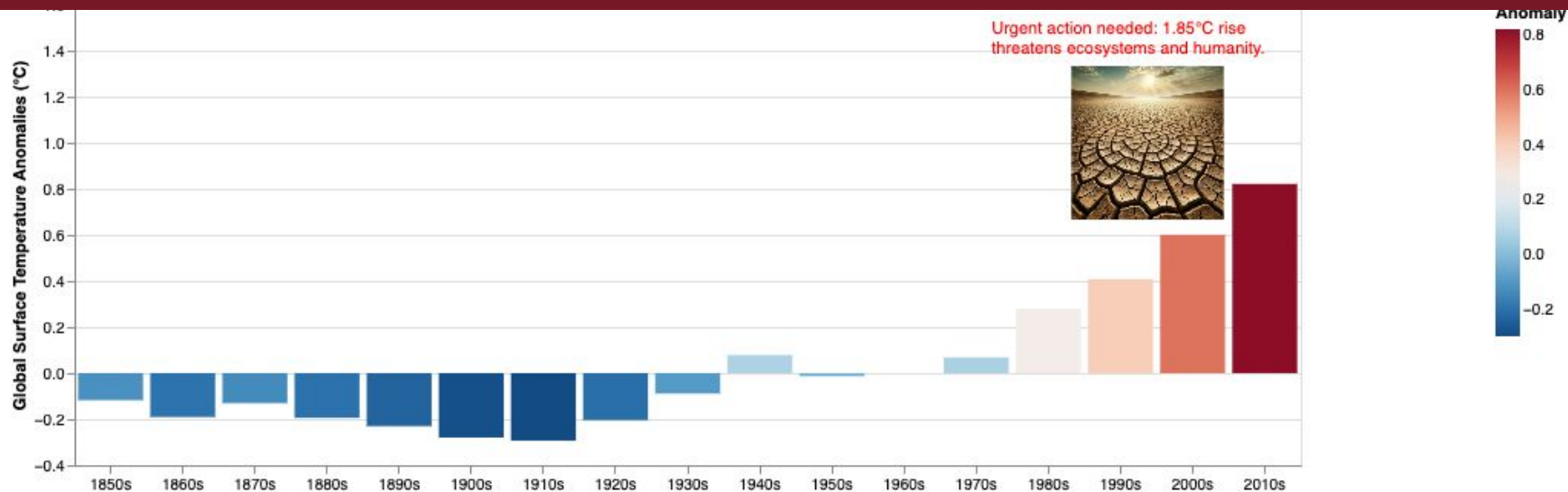
Use AI to help choose the best chart or directly build the chart.

Information

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.



Expand solar, wind, and geothermal energy!

Use AI to propose the best chart for a given audience

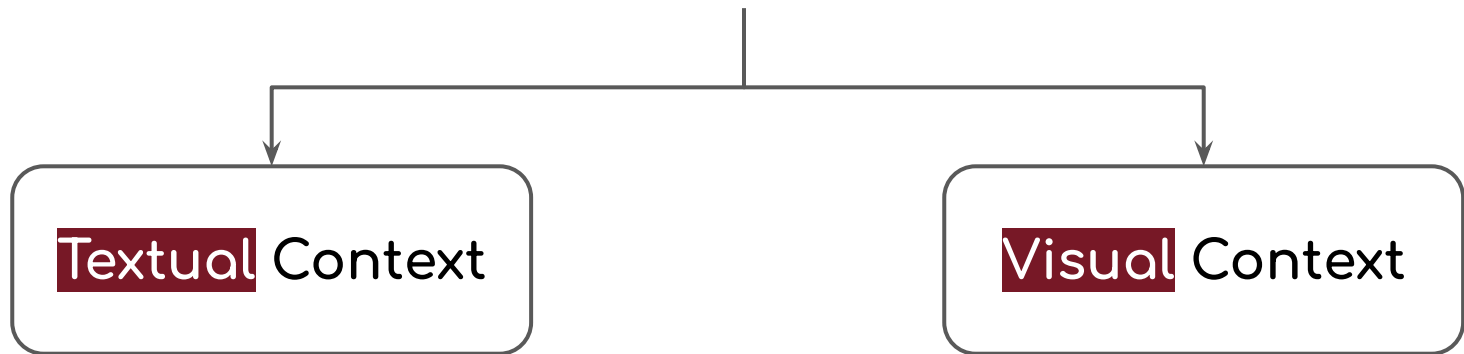
Act to inform a general audience. What is the best chart to show the audience a trendline about temperature increase, and why?.

Title: Understanding Global Temperature and Its Yearly Calculation

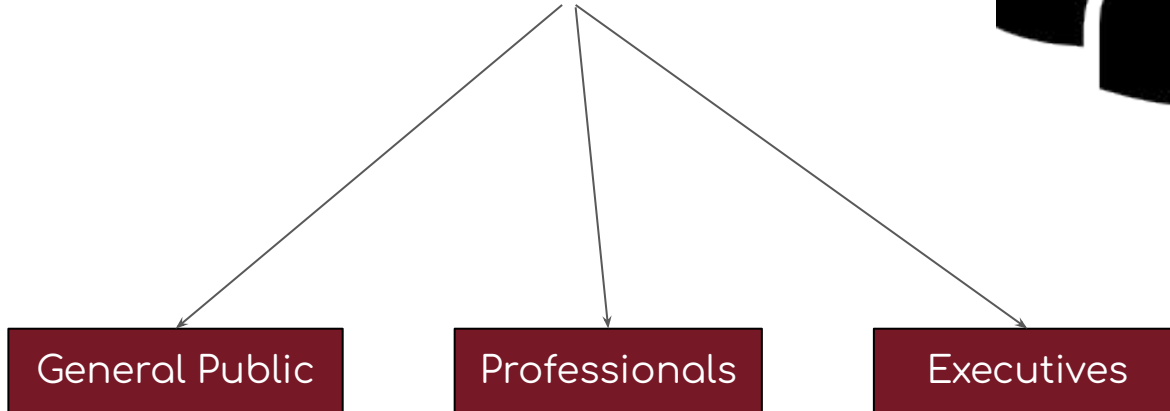
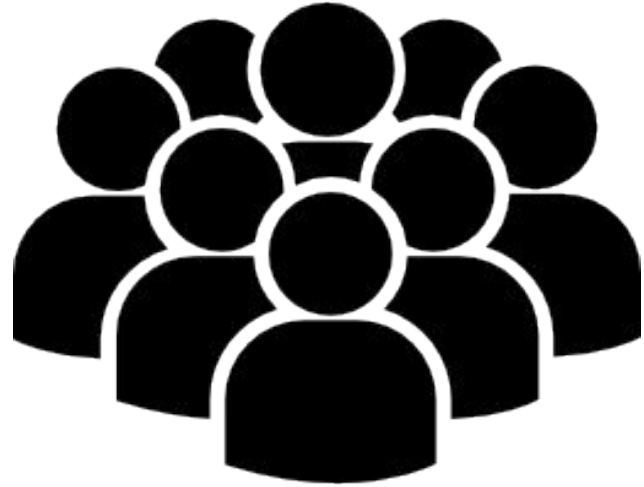
Commentary: Global temperature represents Earth's average surface temperature. Scientists calculate it annually using data from land and ocean sensors worldwide, averaging readings to track climate trends and global warming effects.

Information

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



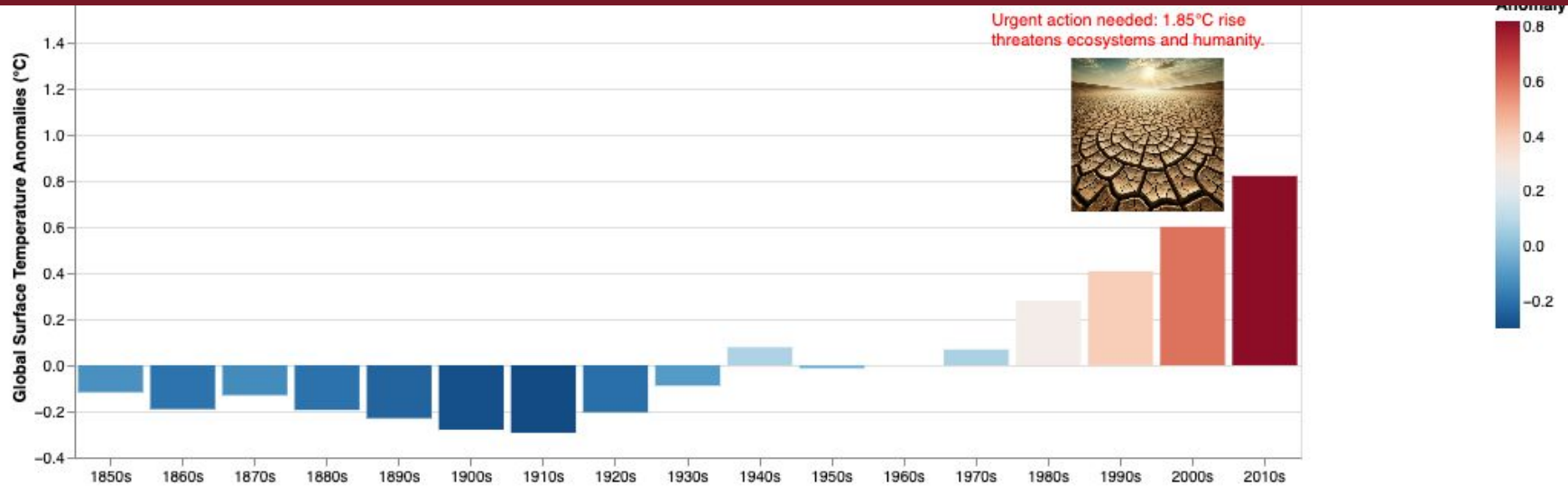
You always tell a story
to an **audience**



Information

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Tailor the Context for the General Audience

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.



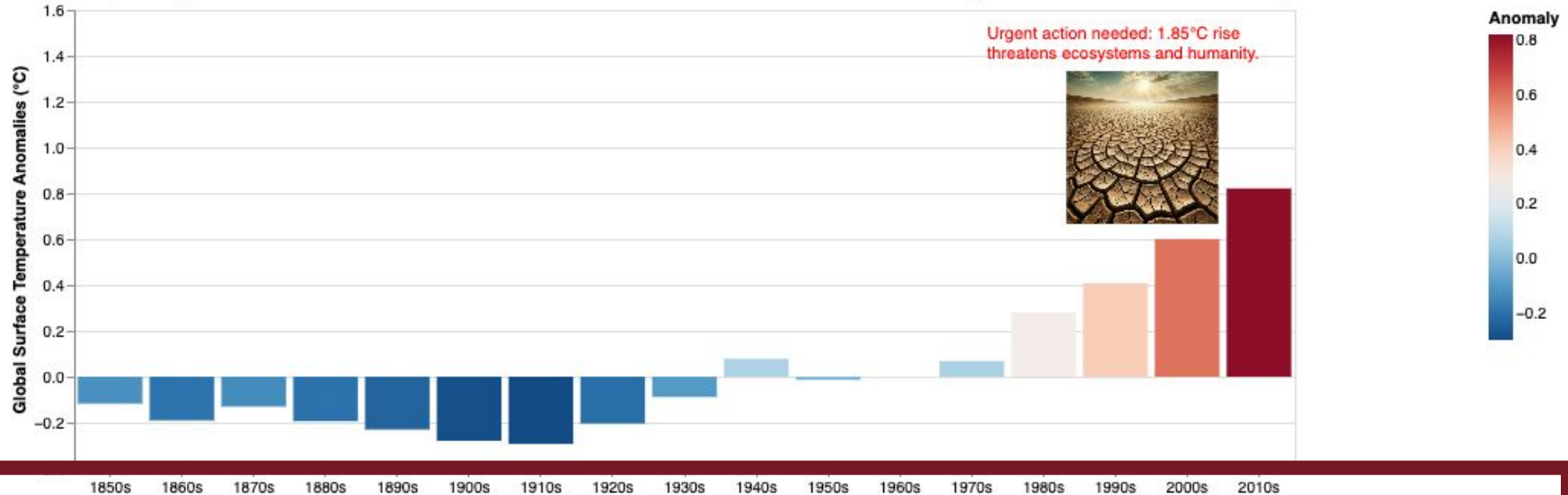
AI is your assistant,
not your replacer.

You control the story.
AI helps you.

Next Steps

Understanding Global Temperature: A Crucial Metric for Climate Action

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Wisdom

Use AI to propose
some possible ideas of calls to action

Propose possible strategies for Decision-makers

Scenario: Global temperatures have risen 1.2°C since 1977, intensifying climate change. Suggest 4 possible strategies decision-makers can follow to mitigate climate change.

1. Accelerate Renewable Energy Transition
2. Implement Carbon Pricing
3. Enhance Sustainable Land Use and Reforestation
4. Promote Energy Efficiency and Green Infrastructure

Propose possible strategies for a general audience

Scenario: Global temperatures have risen 1.2°C since 1977, intensifying climate change. Suggest 4 possible strategies the general audience can follow to mitigate climate change.

1. Reduce Carbon Footprint in Daily Life
2. Support Renewable Energy & Energy Efficiency
3. Practice Sustainable Consumption
4. Engage in Climate Advocacy & Education

Propose possible strategies for people who don't believe in climate change

Scenario: Global temperatures have risen 1.2°C since 1977, intensifying climate change. Suggest 4 possible strategies the general audience of people who do not believe in climate change can follow to mitigate climate change.

1. Save Money with Energy Efficiency
2. Support Local Businesses and Farmers
3. Improve Air and Water Quality
4. Drive Smarter, Save More

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!

Data Storytelling

with Altair and AI

Angelica Lo Duca



 MANNING