

# Writing Alt Text for Data Visualization

Amy Cesal • July 23, 2020

alt= “**Chart type** of **type of data**  
where **reason for including chart**”

Include a **link to data source**  
somewhere in the text

Alt text (sometimes called alt tags or alternative text) are written descriptions added to images that convey the meaning of the visual. Good alt text helps more people understand the content. Assistive technology like screen readers reads the alt text out loud so users can hear and understand the visual content. People who use screen readers often have a vision impairment. This includes people who are totally blind, but also people with low or impaired vision.

Not writing alt text means that people miss out on content that is necessary, just because it's visual. It means it's not accessible.

Alt Text defined from Webaim:

| It is read by screen readers in place of images  
allowing the content and function of the image



## cognitive disabilities.

**It is displayed in place of the image in browsers if the image file is not loaded or when the user has chosen not to view images.**

**It provides a semantic meaning and description to images which can be read by search engines or be used to later determine the content of the image from page context alone.**

There are many resources for how to write alt text generally (I list more at the end of this piece), but few that provide guidance for how to write descriptions for data viz.

### How to write for alt text for data visualization

So how do you write something short that conveys the whole meaning of a visualization? You probably can't. That doesn't mean that you shouldn't try.

- Adding alt text is better than not doing anything at all if there's meaningful information in the image.
- Add a long description if you can add HTML, to more fully convey the meaning.
- Supplement with a link to the raw data, so curious readers can access the data in their own preferred program.
- Keep your alt text short. Alt text is read linearly by screen readers, which means that people can't go back a word if they missed something. For SEO purposes, Google cuts off after a certain amount of characters.

The World Wide Web Consortium (W3C), an international Web standards setting community, offers guidelines for alt text for complex images, but it can be difficult to interpret how to apply these to data visualization. Below, I interpret these guidelines to apply to charts and graphs. Refer to the W3C guidelines for nuance and compliance.



alt= “**Chart type** of **type of data** where **reason for including chart**”

Include a **link to data source** somewhere in the text

Example alt-text format for dataviz

## Chart type

It's helpful for people with partial sight to know what chart type it is and gives context for understanding the rest of the visual.

Example: *Line graph*

## Type of data

What data is included in the chart? The x and y axis labels may help you figure this out.

Example: *number of bananas sold per day in the last year*

## Reason for including the chart

Think about **why** you're including this visual. What does it show that's meaningful. There should be a point to every visual and you should tell people what to look for.

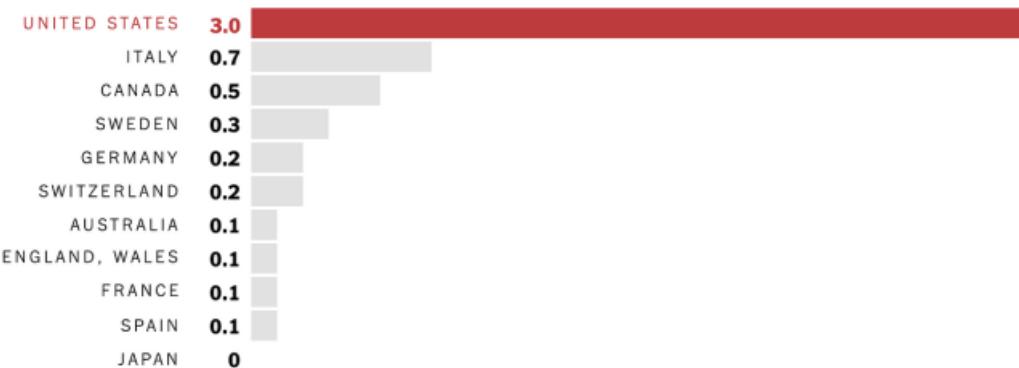
Example: *the winter months have more banana sales*

## Link to data or source

Don't include this in your alt text, but it should be included somewhere in the surrounding text. People should be able to click on a link to view the source data or dig further into the visual. This provides transparency about your source and lets people explore the data.

Example: *Data from the USDA*

## Simple chart alt text example

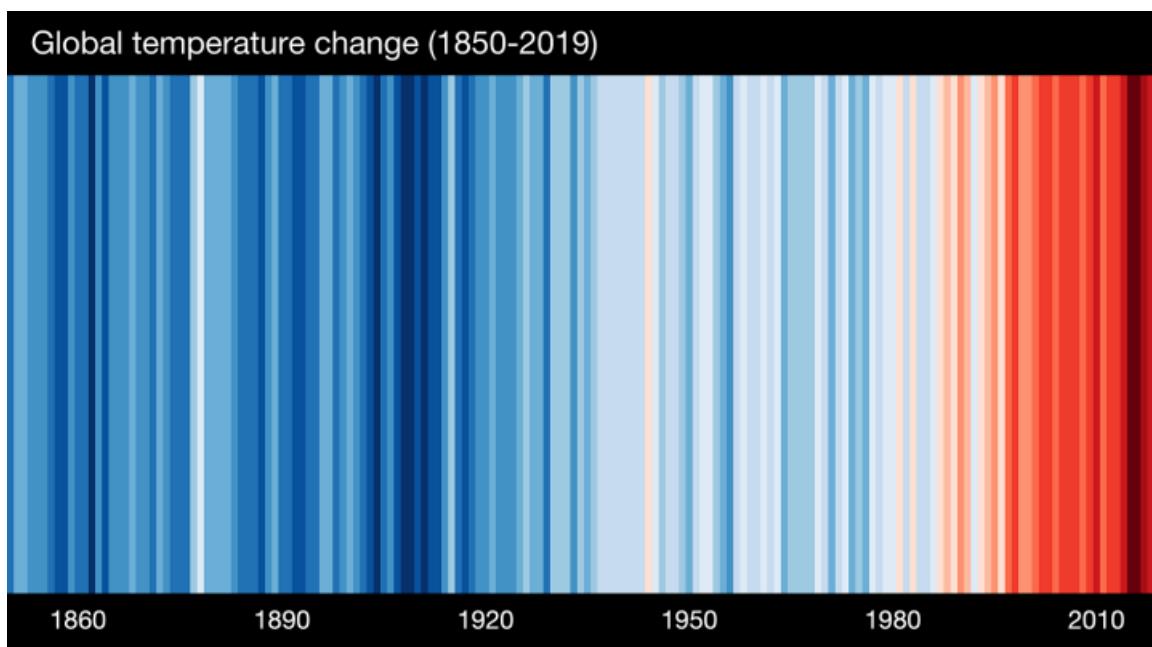


The New York Times | Sources: United Nations Office on Drugs and Crime (gun murders); Small Arms Survey (guns per 100 people) | Murder data for U.S., Canada, Sweden, Switzerland, Australia and Spain from 2015 and latest available for other countries; 2007 data for guns per 100 people.

If I was posting this chart from the New York Times article “[How to Reduce Shootings](#)” on social media I would include a link to the article and write this alt text:

alt= “**Bar chart** of gun murders per 100,000 people where **America’s murder rate is 6 times worse than Canada, and 30 times Australia**”

## Complex chart alt text example



If I was posting a less typical chart type like the [Warming Stripes](#) from Ed Hawkins, I would include a link to the source and focus on the meaning behind them for the alt text:

alt= “**Colored stripes** of **chronologically ordered temperatures** where **they increase in red to show the warming global temperature**”



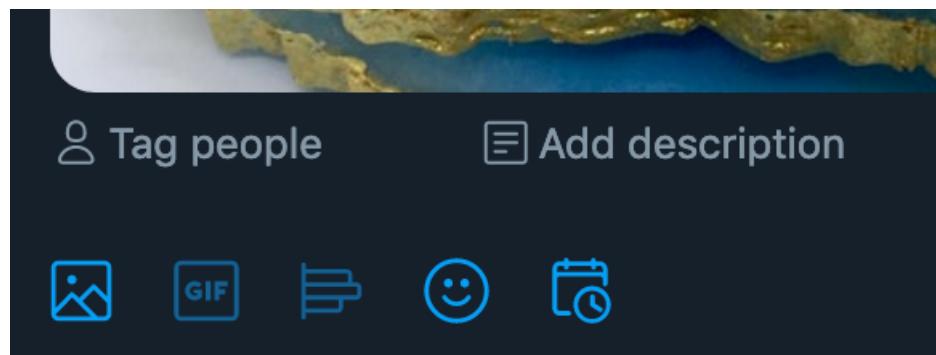
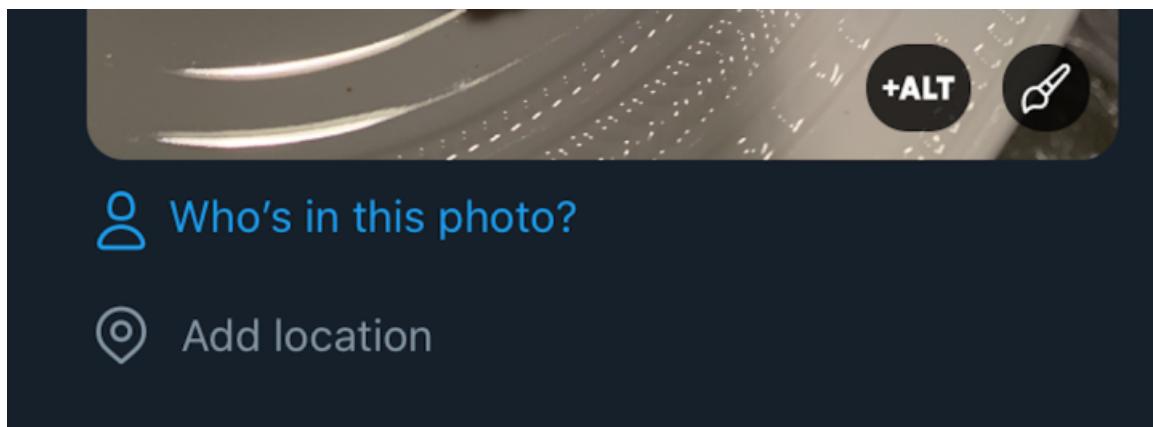
## In HTML code

Add alt text `alt=""` to any image that adds meaning inside the image tag `<img>`.

Add a long description `longdesc=""` when possible.

## On Twitter

When you add an image, use the add **description button** or **+alt**. [Twitter has full instructions.](#)



## On Instagram

Instagram hides the alt text functionality, but there is [documentation on how to add alt text.](#)

- Choose a filter and edit the image, then tap **Next**.
- Tap **Advanced Settings** at the bottom of the screen.
- Tap **Write Alt Text**.

## In Microsoft Office products



documentation on how to add alt text.

## On Medium

Click on the image in the post. Use the “Alt text” label to write your text.



By writing effective alternative text or alt text and including it when you publish data visualization you provide a way for people who cannot see the image to understand the content so they are not missing out on critical information. Having alt text is necessary in order for the visual content to be accessible.

## Other reading

### Alt text

- Web Accessibility Tutorials: Complex images | W3C
- Alt Text & Accessibility | Web Aim
- How to Write Great Image Alt Text | Catherine McNally
- The Right Way to Write Alt Text | Natalie Gotko

## Accessibility for dataviz

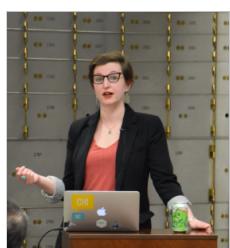
- Data Visualization Accessibility: Where Are We Now, and What's Next? | Melanie Mazanec
- Why Accessibility Is at the Heart of Data Visualization | Doug Schepers
- An intro to designing accessible data visualizations | Sarah L. Fossheim
- 5 easy ways to make your data visualization more accessible | Amy Cesal

Thank you to Doug Schepers and Zander Furnas for reviewing.



## Amy Cesal

Website



Amy Cesal is a data visualization designer and instructor. She is a co-founder and board member of the Data Visualization Society. Amy is a 3 time Information is Beautiful award winner and enjoys creating unusual data visualizations. She holds a Master's Degree in Information Visualization from the Maryland Institute College of Art, where she is an adjunct professor. Amy has pioneered the use of data visualizations style guidelines, and writes and speaks on the topic.

### Related entries



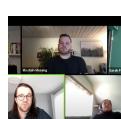
JULY 20, 2023

Teaching the Foundations of Data Visualization



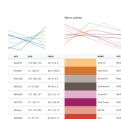
NOVEMBER 17, 2021

Announcing the 2021 Data Visualization SOTI Survey Challenge!



AUGUST 6, 2021

Highlights from the DVS Accessibility Fireside Chat



JULY 13, 2020

How to Create Brand Colors for Data Visualization Style Guidelines

### CATEGORIES:

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TAGS: [accessibility](#), [alt text](#), [data literacy](#), [data visualization](#), [how to](#)

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**‘gale**

The logo features the word "the" in a large, bold, black sans-serif font. Below it, the words "Nightingale's newsletter" are written in a smaller, lighter gray sans-serif font. To the right of "the", the word "gale" is written in a large, bold, black sans-serif font, with a small apostrophe preceding the "g". The entire logo is set against a solid blue rectangular background.

From our sponsors



A photograph showing three books by Jordan Morrow: 'BE DATA LITERATE THE DATA LITERACY SKILLS EVERYONE NEEDS TO SUCCEED', 'BE DATA DRIVEN HOW ORGANIZATIONS CAN HARNESS THE POWER OF DATA', and 'ANALYTICAL HOW TO USE ANALYTICS TO TURN DATA INTO VALUE'. A small portrait of the author, Jordan Morrow, is in the top left corner. A yellow circle with the text 'Everywhere Books Are Sold' is overlaid on the top right. A tan tote bag with a black outline of a person is draped over the books. A dark blue bar at the bottom right contains the website address: [koganpage.com/data-literacy](http://koganpage.com/data-literacy)

## From our sponsors



A promotional graphic for a workshop. The background features a map of Europe with various countries highlighted in different colors (blue, green, yellow, red) and labeled with abbreviations like EU, TUR, ISR, SAU, UKR, etc. Overlaid on the map is the title 'Visualizing Complexity Science Workshop' in large, bold, black and blue letters. To the right of the title, the dates '28 Aug – Sept, 2023' are listed. Below the title, a blue banner contains the text 'Join us in Vienna for an immersive 5-day workshop!'

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A promotional graphic for a masterclass. The background is yellow. On the left, the title 'Data Storytelling Masterclass' is written in large, bold, black letters. Below it, the text 'Become a master data communicator in 2 weeks' is in a smaller, black font. On the right, there is a portrait of a smiling woman with long brown hair, wearing a black t-shirt. A black starburst shape next to her contains the text 'with Evelina Judeikytė'. At the bottom, a dark blue button contains the text 'Enrol for the upcoming cohort today >>'.



Great Responsibility

Won't Forget the Map Room  
Project

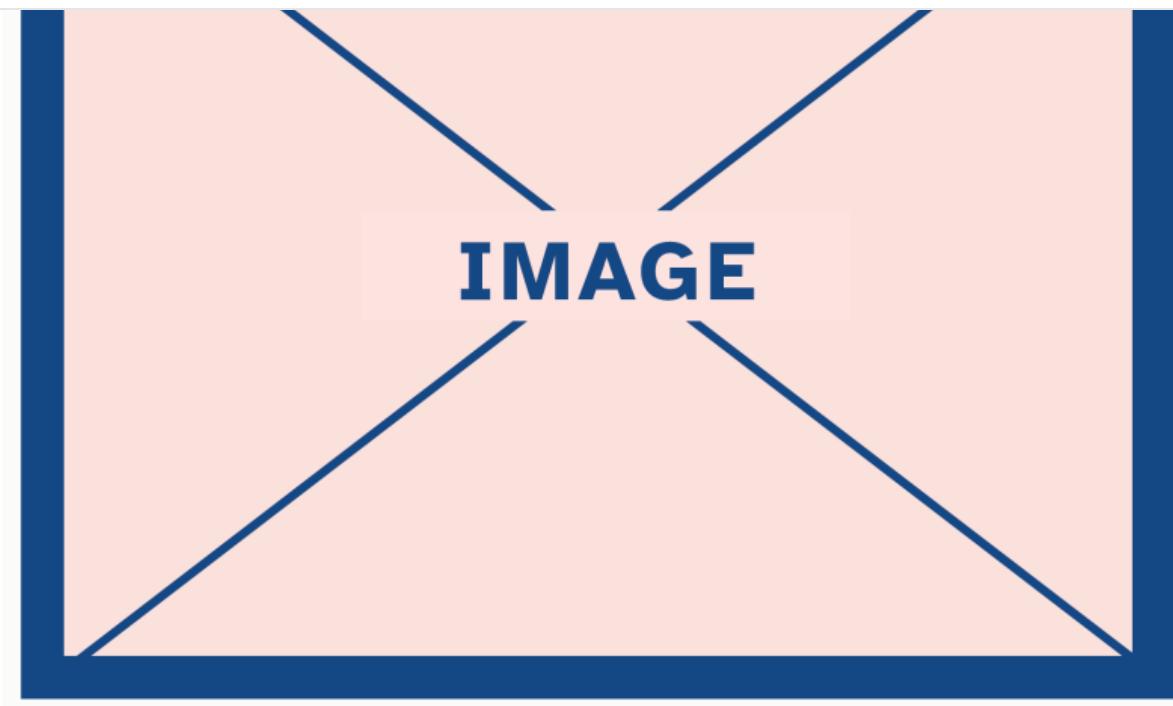
## Related articles



NIGHTINGALE EDITORS

### **Visual Accessibility Resources**

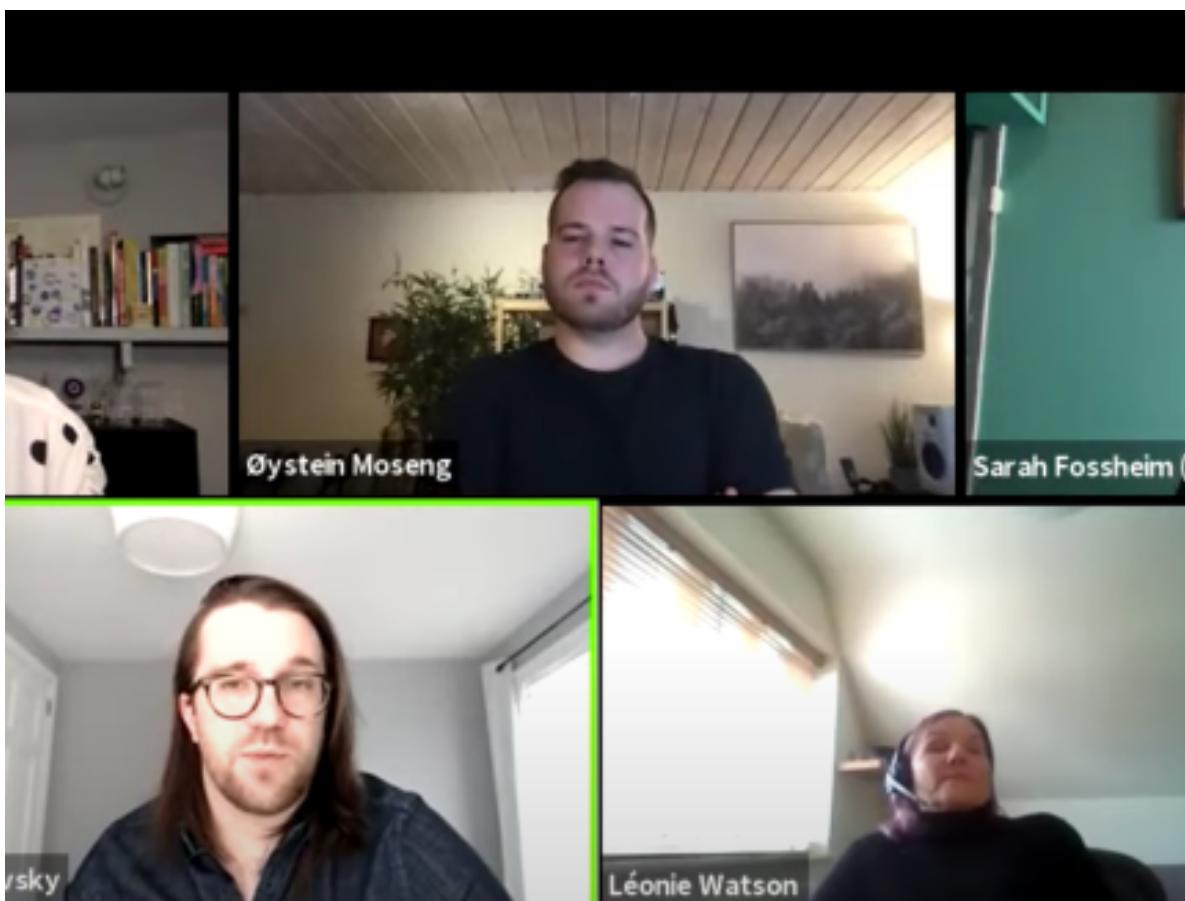
Looking for guidelines to follow in your data viz accessibility journey? This curated list will help to get you to the next level.



EMILY BARONE & FRANK ELAVSKY

## A New Vision for Data Viz Accessibility

As the data viz industry becomes more aware of the barriers it creates for blind and visually impaired people, things are starting to change.





AMYCESAL

## Highlights from the DVS Accessibility Fireside Chat

On July 28, 2021, the Data Visualization Society hosted a Fireside Chat to discuss accessibility in data visualization. I moderated a panel of community members..

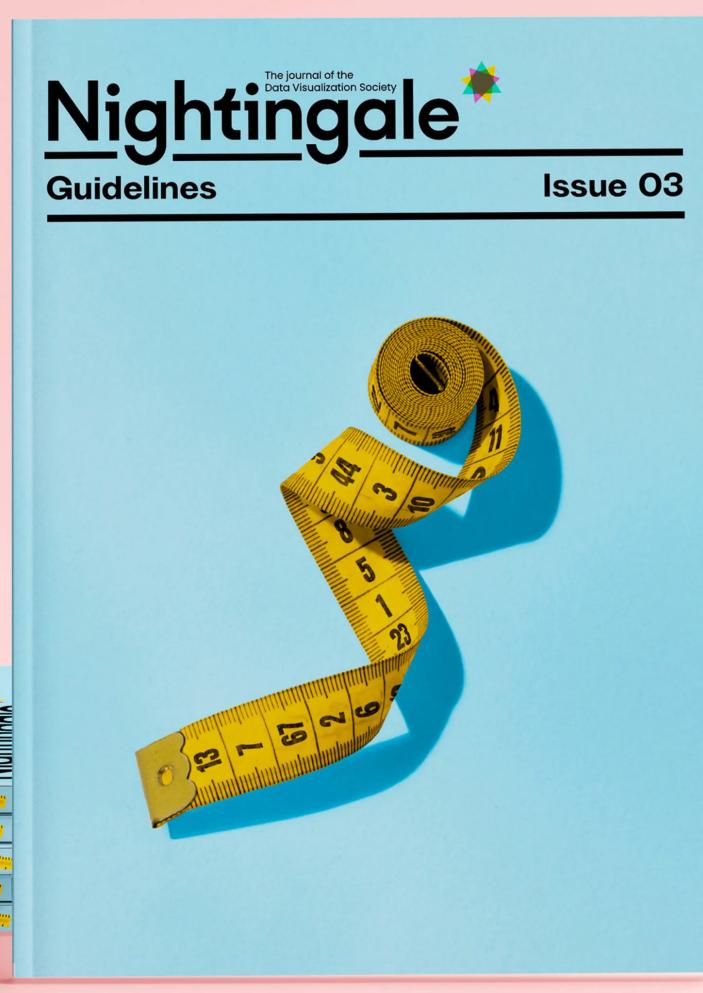
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