

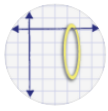
perpendicular angel design

organizing and simplifying, one illumination at a time

AN EVENT APART OT 2021: ACCESSIBLE DATA AND SOUND BY REGINE GILBERT

Next up is Regine Gilbert presenting on Accessible Data and Sound. Her presentation is much more in the style of an academic conference — which isn't a bad thing! It's nice to see the rigor in the process she's describing! But it did make taking notes a little more challenging because she had lots of great information per slide.

Because this year I used Twitter's threading / topics feature, it's giving me 2 tweets in each embed I do here. I'm embedding every other tweet for readability. There's a PDF at the bottom of the page in case this all collapses.

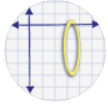


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

First, an explanation of ableism. Ableism is discrimination and social prejudice against people with disabilities or who are perceived to have disabilities. [#aeaot](#)



Anne Gibson

@perpendicularme

Assumptions are things that we haven't thought about critically.

Bias is disproportional weight in favor of or against one thing, person, or group compared with another.

[#aeaot](#)

4:48 PM · Oct 12, 2021

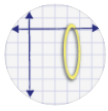


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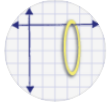


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

Social justice is the just relationship between individuals and their society, involved with how privileges, opportunity, and wealth ought to be distributed. [#aeaot](#)



Anne Gibson

@perpendicularme

marginalization is the process where someone or something is pushed to the edge of a group and is treated as insignificant or peripheral [#aeaot](#)

4:50 PM · Oct 12, 2021

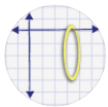


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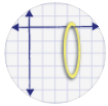


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

Self awareness: having a clear perception of your personality. [#aeaot](#)



Anne Gibson

@perpendicularme

Transformative research is a research framework that centers the experiences of marginalized communities [#aeaot](#)

4:52 PM · Oct 12, 2021

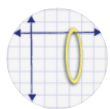


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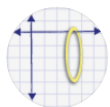


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

unlearning oppression is acknowledging our everyday oppressive practices and engage in critical self-reflection with the aim of becoming actively anti-oppressive [#aeaot](#)



Anne Gibson

@perpendicularme

Get familiar with these terms. lesley-Ann Noel, PhD has The Designers Critical Alphabet on Etsy. [#aeaot](#)

4:53 PM · Oct 12, 2021

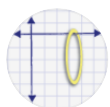


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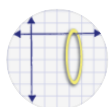


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

The project Regine is presenting is based on work supported by NASA. [#aeaot](#)



Anne Gibson

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Where are you right now? we're all in the milky way galaxy, and we're circling the sun.

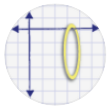
The sun has 4 layers: the core, the corona, the photosphere, and the chromosphere. [#aeaot](#)

4:55 PM · Oct 12, 2021



See the latest COVID-19 information on Twitter

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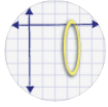


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

During the solar eclipse the moon moves between the sun and the earth, casting a shadow on the earth. The sun's corona is visible from earth if you're in the right place. #aeaot



Anne Gibson
@perpendicularme

If you cannot see an eclipse, how can you experience it?
When an eclipse occurs the sounds in nature tend to become quieter, and some nighttime animals start to make noises #aeaot

4:58 PM · Oct 12, 2021



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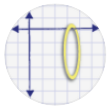


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The first sentence of the next tweet is “The next eclipse is going to be 5 minutes and 17 second long, and animals will think that it’s night.

Damn you, autocorrect.



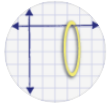
Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

The next eclipses issue going to be 5 minutes and 17 seconds long, and animals will think that it's night.

The soundscapes eclipse project css to feature real-time narration of different aspects of the eclipse timed for the user's location [#aeaot](#)



Anne Gibson

@perpendicularme

In 2020 Regine was invited to go to a blind soldering event - teaching blind people how to solder computer boards. During that she got the opportunity to have her students work with NASA.

[#aeaot](#)

5:01 PM · Oct 12, 2021

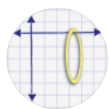


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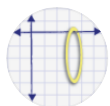


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

The current project will last 5 years from January of 2021 through 2026. The goal is to create accessible opportunities for citizen scientists to participate in real and meaningful scientific research that focuses on how eclipses affect soundscapes
[#aeaot](#)



Anne Gibson

@perpendicularme

The project will advance national education goals, work with the blind and low vision community to learn, work with subject matter experts. Citizen science will happen for the 2023 eclipse and the 2024 total eclipses.

[#aeaot](#)

5:03 PM · Oct 12, 2021

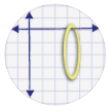


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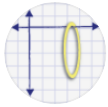


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

They'll use noncompetitive gamification to address the skills necessary to investigate the science questions. [#aeaot](#)



Anne Gibson

@perpendicularme

importantly, this is done with people with disabilities, not for them but without them.

Universal design for learning focuses on multiple means of engagement, representation, and action and expression.

[#aeaot](#)

5:05 PM · Oct 12, 2021

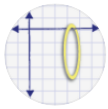


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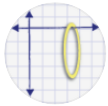


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

They are a lot of people working on all kinds of parts. Regine is focusing on th UX with the usual research methodologies [though probably deeper than those of us working in enterprises get a chance to do!] [#aeaot](#)



Anne Gibson

@perpendicularme

Limited opportunities and poor users experience design with sound technologies make it not fun. People want to learn and research about the impact of the eclipse on soundscapes but they need accessible places to do that. So they need something accessible [#aeaot](#)

5:09 PM · Oct 12, 2021

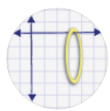


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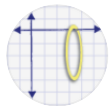


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

She's going over fascinating research results that I'm not going to try to type out here. Regine's research pretty much confirm everything we've heard all conference about writing good web pages. #aeaot



Anne Gibson

@perpendicularme

They're using content models to determine the audience, purposes, key words, browser title, friendly url, page content, images, downloads, and other things. #aeaot

5:14 PM · Oct 12, 2021

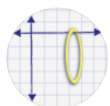


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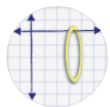


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

The content model is super helpful for helping ensure content is accessible. #aeaot



Anne Gibson

@perpendicularme

Wireframes developed by students are based on the content models. #aeaot

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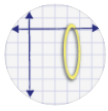


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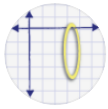
Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

What makes a website easy to use? First, make it accessible. Second, reduce the amount of blue light it shines. Third, make it responsive so it works on mobile.

[#aeaot](#)



Anne Gibson

@perpendicularme

AudioMoth is a low-cost full-spectrum acoustic logger based on the Gecko processor range from Silicon Labs that they're sending to citizen scientists. They'll record sounds during the eclipses. ARISA labs and consultants are putting together the kits. [#aeaot](#)

5:19 PM · Oct 12, 2021



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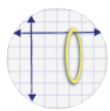


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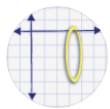


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

Instructions to put the audio moths together were not clear, so they added that as a page to the website. #aeaot



Anne Gibson

@perpendicularme

data sonificatin is the presentation of data as sound using sonificatin. [I think @SciShow had a recent example in one of their videos.] #aeaot

5:20 PM · Oct 12, 2021

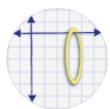


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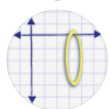


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

There are a lot of challenges when it comes to data, sound, and screen reader use. How do you organize the data and keep it keyboard navigable? How do you make data comparable on a screen reader? How do people using screen readers add key information? #aeaot



Anne Gibson

@perpendicularme

The interface for the sound system looks complex, but they've made it accessible - go over a particular area of the sound with your mouse (keyboard is coming).

#aeaot

5:23 PM · Oct 12, 2021

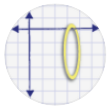


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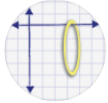


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

Think about the data interactivity and how you can select any point in the line with time, frequency, site, etc. The site needs to work for blind and low vision users but also color vision deficient users so color usage is important too. [#aeaot](#)



Anne Gibson

@perpendicularme

All the icons need typography to be understood by screen readers. "Although most screen reader users use a keyboard and not a mouse, they are not restricted to a limited set of keyboard commands as other keyboard users" Leonie Watson [#aeaot](#)

5:25 PM · Oct 12, 2021

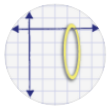


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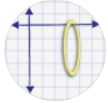


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

They're converting to SVG format instead of HTML so they can access individual elements on graphs. Everything has to be labeled - axes, data points, visuals, major insights, tables, and summaries of the information story. [#aeaot](#)



Anne Gibson

@perpendicularme

What hasn't worked:
Surveys!

What has worked:

- Interviews
- Content modeling
- participatory design of audio moth
- working with the national association of accessible media

[#aeaot](#)

5:28 PM · Oct 12, 2021

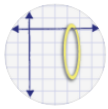


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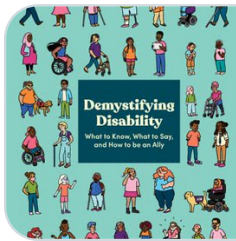


Replying to @perpendicularme

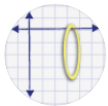
Emily Ladau has just published demystifying disability: what to know, what to say, and how to be an ally. Read this especially if you're a designer.

bookshop.org/books/demystif...

[#aeaot](#)



Demystifying Disability: What to Know, What to Say, and How to Be an Ally a book by ...
An approachable guide to being a thought...
bookshop.org



Anne Gibson
@perpendicularme

We all have the opportunity to work with our communities. [#aeaot](#)

5:29 PM · Oct 12, 2021

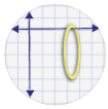


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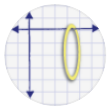


Replying to @perpendicularme

Next steps for the project:

- co-design of comparable data analysis
- usability testing with national federation of the blind
- adding accessibility features
- implementing more gamification components
- content creation for lessons
- expanding accessibility components

[#aeaot](#)



Anne Gibson

@perpendicularme

Get involved! They need citizen scientists!

eclipsesoundscapes.org [#aeaot](#)

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