Award-winning infographic designer Nadieh Bremer on how to create powerful data visualisations

Many of us disregard infographics and data visualisation as boring, dry vector-shaped static images, but this is simply ill-informed. With a boom in data journalism over the last few years and a rise in various styles of data visualisations – everything from sketches to animation – and tools democratising the skill, data visualisation has become the new way to shed light on our political, social and environmental world.

Nadieh Bremer is an astronomer-turned-data-visualisation-designer. She recently cleaned up at Kantar's Information is Beautiful awards (which celebrates infographics and data viz globally), winning three awards – Best Individual, Gold in the 'Unusual' category and 'Silver' in the Science category. See the full list of winners here.

With a passion for beautiful design paired with a number-crunching brain, we wanted to find out from Nadieh how she creates her award-winning graphics, and what steps are needed to become a data viz designer, including steps needed when jumping from graphic design.

Nadieh Bremer at Information is Beautiful Awards 2017
Nadieh Bremer is based just out of Amsterdam as a freelance data visualisation designer. She studied astronomy and became an analytics consultant for Deloitte before realising her true passion is about visualising data and the stories it tells about our society, such as her award winning work on why so many babies are born around 8am for *Scientific American* and

the earth’s plant growth and decline, inspired by data from the Dutch quarterly World Wildlife Fund magazine.

“People are visual beings. We need to see trends; we can’t deal with a table of numbers,” she says. “Data viz is riding on a wave of data and we need to make it so more data is being used, [hence] the need for great visualisation.”

She discovered the profession of a data visualisation designer at a conference, and immediately knew it was for her. But it took years to master the technology involved in making these complex visualisations, such as the JavaScript library for producing data viz in web browsers, D3, of which she uses to make many of her visualisations now. After reading a lot of books, taking time in her weekends to explore her talent, Nadieh went freelance. She admits it was a steep learning curve, and it took her several years to become comfortable with the technology, even with her background as an astronomer using similar software.



Nadieh’s visualisation on when babies are born for *Scientific American*

She’s accumulated an impressive list of clients as a result of her hard work, who each rely on her visual and mathematical to interpret their data, ranging from small startups to big companies in the areas of aviation, pharmacology, oil and online, such as Google News Lab and *The Guardian.*

Companies approach Nadieh with data if it’s complex and it doesn’t know how to visualise it, or for an external promotion. Nadieh digests the data, finds the underlying narrative it holds and makes designs in conjunction with the client. She uses D3 to create her final visualisation, or sometimes creates a poster in Illustrator.

Each project is dependant on the wants and needs of the audience. Do they need to quickly grasp the idea? Should lots of data be included so people can find their own stories with

extra layers of information? Nadieh writes down all the variables, and starts sketching ideas on how the variables can fit into one visualisation. She finds inspiration from what she's seen on Twitter or Pinterest.


Nadieh's collaboration with Google News Lab on the most common words translated to English

To then build the visualisation is a little more complicated – it involves using R and D3 and loading HTML into JavaScript. But now there are also tools like DataVizProject, an online archive of data visualisation templates created by infographic agency Ferdio, Adobe's proposed Lincoln tool (shared during Sneaks at Adobe Max this year) to make it easier for everyone to create infographics and data visualisations. Artificial intelligence (AI) also poses a likely force of democratising the process of data visualisation.

Even though these tools can help the job of the data visualisation designer, Nadieh believes they will never be able to do her job entirely on their own.

"AI can pick up on basic form, which might help for simple things, but there needs to be a human to at least guide the process," she says. "AI could provide me with tools and create a whole range of straight forward charts to understand the data, then I [would need to] figure out the design wishes of the client."


Nadieh's collaboration with Google News Lab on the most common words translated to English

Nadieh says the visual concept is more important than the visual execution. Data visualisations have to tell a story, or shed light on information about society we didn't know or fully understand before. They serve no purpose just looking pretty.

"If the idea doesn't fit with the data, even if it looks

fabulous, it’s no use,” she says.



Nadieh’s April month entry of her ‘Data Sketches‘ personal project with Shirley

And even though we live a media-saturated society dominated by immersive technology, interaction and animation, Nadieh says data visualisations should only be interactive if it’s beneficial – to avoid moving into the realm of ‘click bait’.

I asked Nadieh if she follows any specific rules or guidelines for each project.

“The most simple one is to not use pie chart,” she says.

“You need the data to pop and the rest is a helping thing, it should be visually obvious.”



Nadieh’s collaboration with Google News Lab on the most common words translated to English

Other challenges involve finding a good colour palette, avoiding height to determine data (“people don’t know how far yellow is from green”), and use categorical colours. Data visualisation isn’t like most graphic design projects which favour similar hues – the colours have to be distinguishable so people can recognise the differences.

Want to be a data viz designer?

If you’re considering data visualisation design as a profession, or for example, moving from graphic design, Nadieh advises you to learn basic statistics and the basics about data, such as what a mean, a min, max and distribution are. She also recommends the book, *The Truthful Art* by Alberto Cairo.

She says graphic designers may be experts at making visuals look professional, but it’s also important to know how to ask

questions about what the data should show.

https://www.digitalartsonline.co.uk/features/graphic-design/award-winning-infographic-designer-nadieh-bremer-on-how-create-powerful-data-visualisations/