

Visualising data for the web

How to create custom data visualisations using Svelte +
D3.JS (instead of quitting your business)

Rudi O'Reilly Meehan

About me

I bring data to life using code.



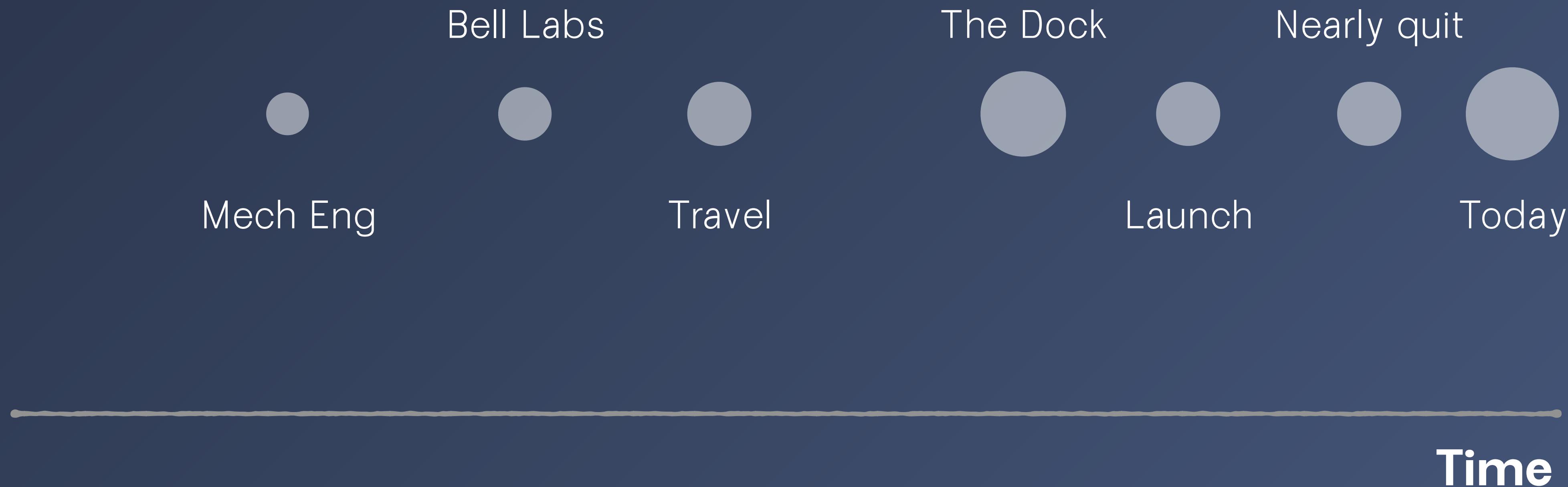
About me

I (try to) bring data to life using code.



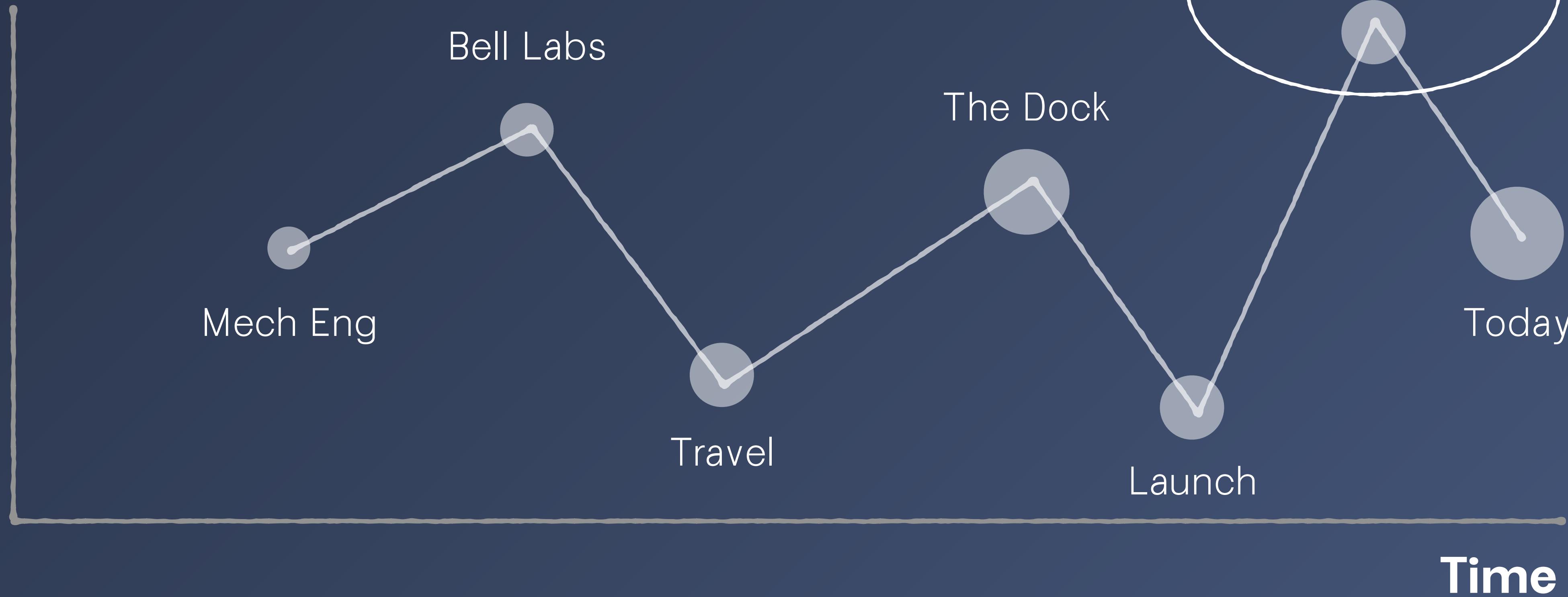
(But sometimes the code gets in the way)

My career in a graph



This talk

Impostor syndrome



Some of my work

How it started

03



How it ended up

```
<script>
  //map_data
  var paths2 = g
    .selectAll("path2")
    .data(counties_data)
    .enter()
    .append("path")
    .attr("d", path)
    .style("stroke-width", "0.2px")
    .style("stroke", "#f8bcd6")
    //.style('fill',function(d){return '#'+d.properties['colour']})
    //.style('fill',function(d){return colorlist[parseInt(Math.floor(2*d.properties.vacant_ratio))]} )
    //.style('fill-opacity',1)

    .style("fill-opacity", function (d) {console.log(d.properties.vacant_ratio)
      return 0.06 * Math.floor(d.properties.vacant_ratio);
    })
    .style("fill", "#181818")

    .on("mouseover",function(d) {
      var p1 = d3.mouse(this);

      if (mover>0)
      {
        d3.select(this).style("cursor", "pointer");
        console.log(p1)

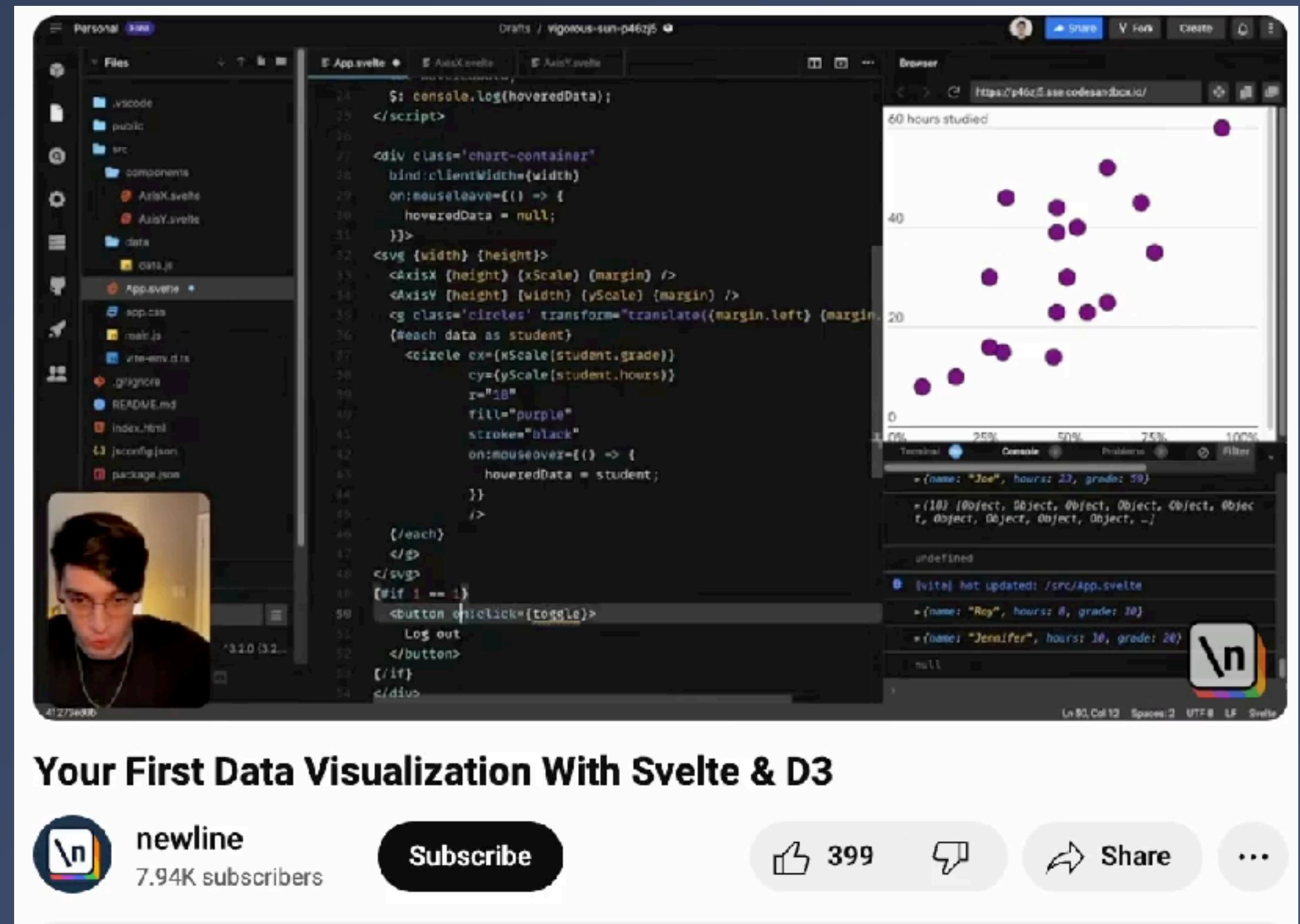
        if( p1[0]>400{
          var ll = p1[0]-300-25
        }
        else{
          var ll = 25+p1[0]
        }

        div.transition()
          .duration(200)
          .style("opacity", 0);
      }
    })
  
```



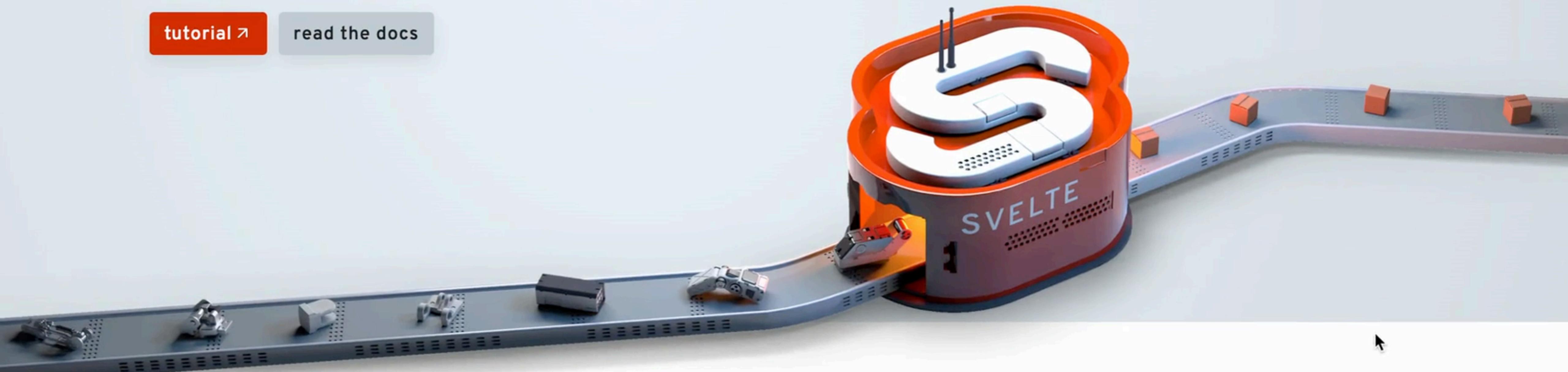
A Christmas miracle

- I discovered the pioneering work data viz practitioners were doing by combining D3 with Svelte
- Major shout out to **Conor Rothschild & Matthias Stahl**



SVELTE

cybernetically enhanced
web apps

[tutorial ↗](#)[read the docs](#)

compiled

Svelte shifts as much work as possible out of the browser and into your build step. No more manual

compact

Write breathtakingly concise components using languages you already know – HTML, CSS and

complete

Built-in scoped styling, state management, motion primitives, form bindings and more – don't

Svelte Syntax

```
<script>
  let count = 0;

  setInterval(() => {
    count++;
  }, 1000);
</script>
```



Javascript

```
<main>
  {count}
</main>
```



HTML

```
<style>
  main {
    font-size: 24px;
  }
</style>
```



CSS

D3 vs Svelte



Imperative coding style

Highly verbose

Non-responsive

Declarative coding style

Compact

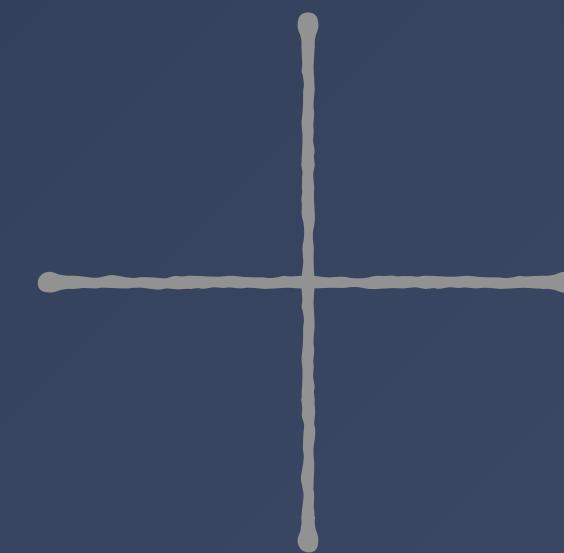
Responsive

SvelteKit for app dev

D3 and Svelte



Math
Paths
Functions



Architecture
Components
Styling
Interactivity

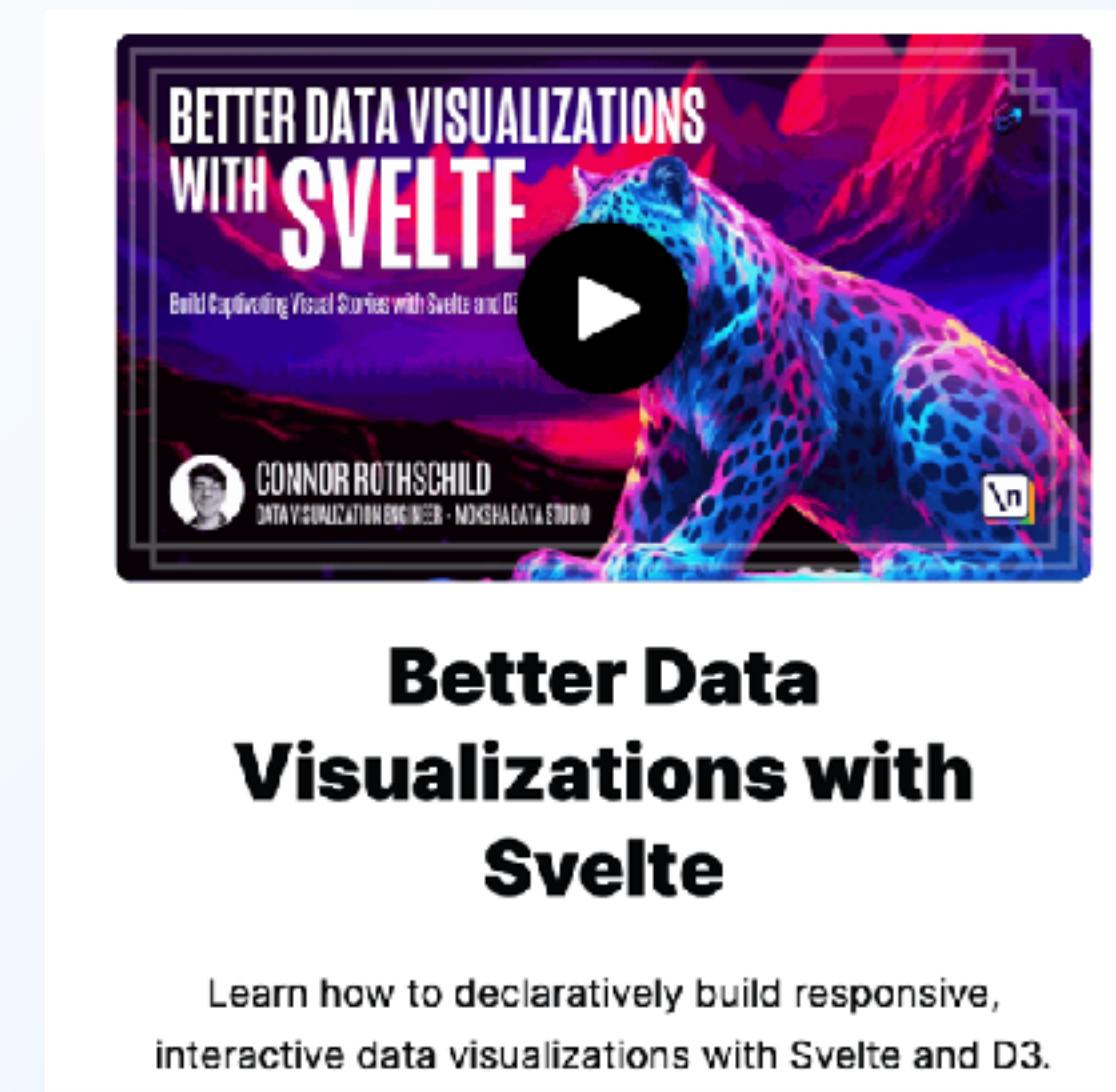
Let's make a visualisation!



<https://tinyurl.com/coduviz>

Other resources

Getting started



Better Data Visualizations with Svelte

Learn how to declaratively build responsive, interactive data visualizations with Svelte and D3.

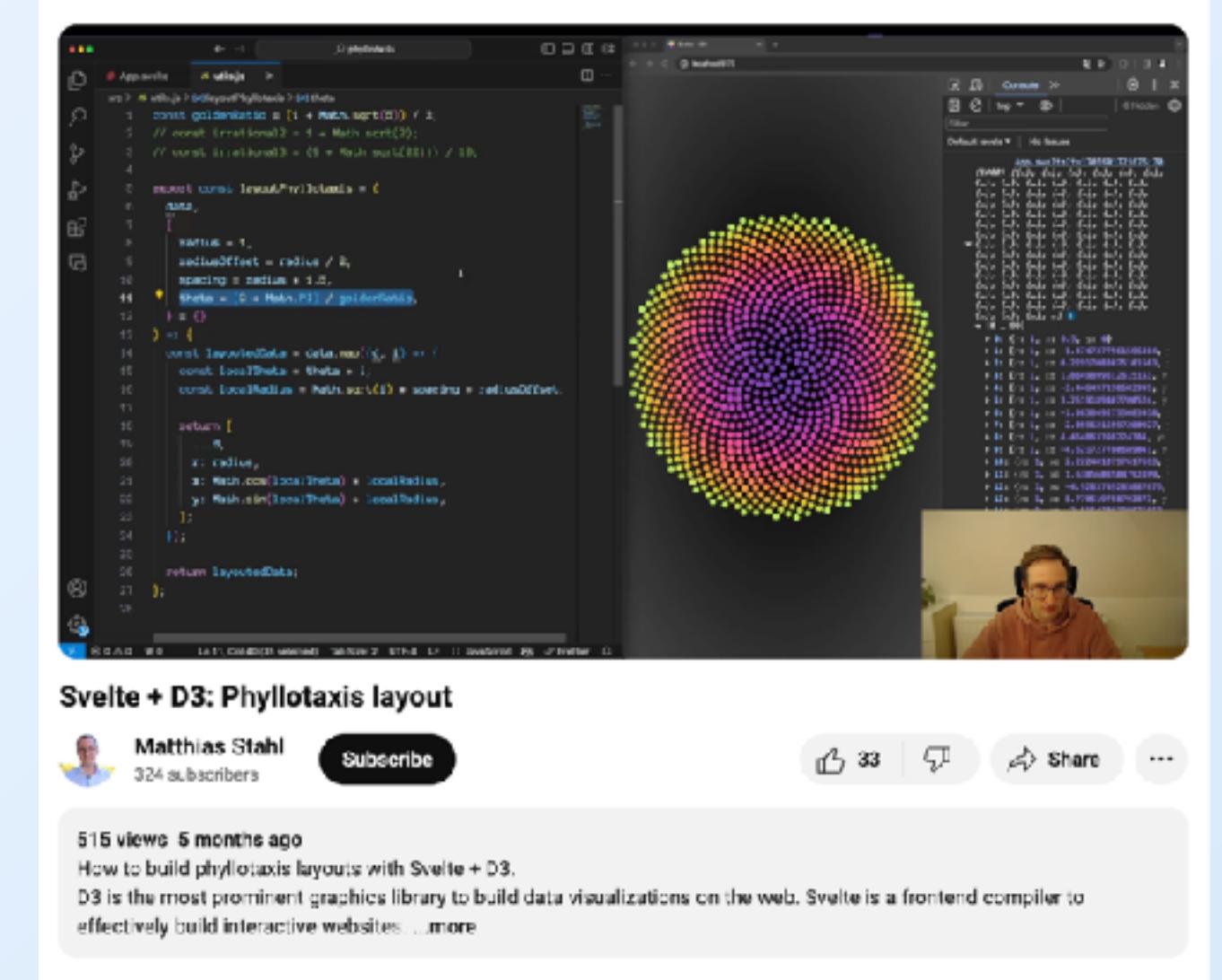
Welcome to the Svelte tutorial! This will teach you everything you need to know to easily build web applications of all sizes, with high performance and a small footprint.

You can also consult the [API docs](#) and the [examples](#), or – if you’re impatient to start hacking on your machine locally – create a project with `npm init svelte`.

What is Svelte?

Svelte is a tool for building web applications. Like other user interface frameworks, it allows you to build your app declaratively out of components that combine markup, styles and behaviours.

These components are compiled into small, efficient JavaScript modules that eliminate overhead traditionally associated with UI frameworks.



“Better data visualisations with Svelte”

Connor Rothschild, Newline

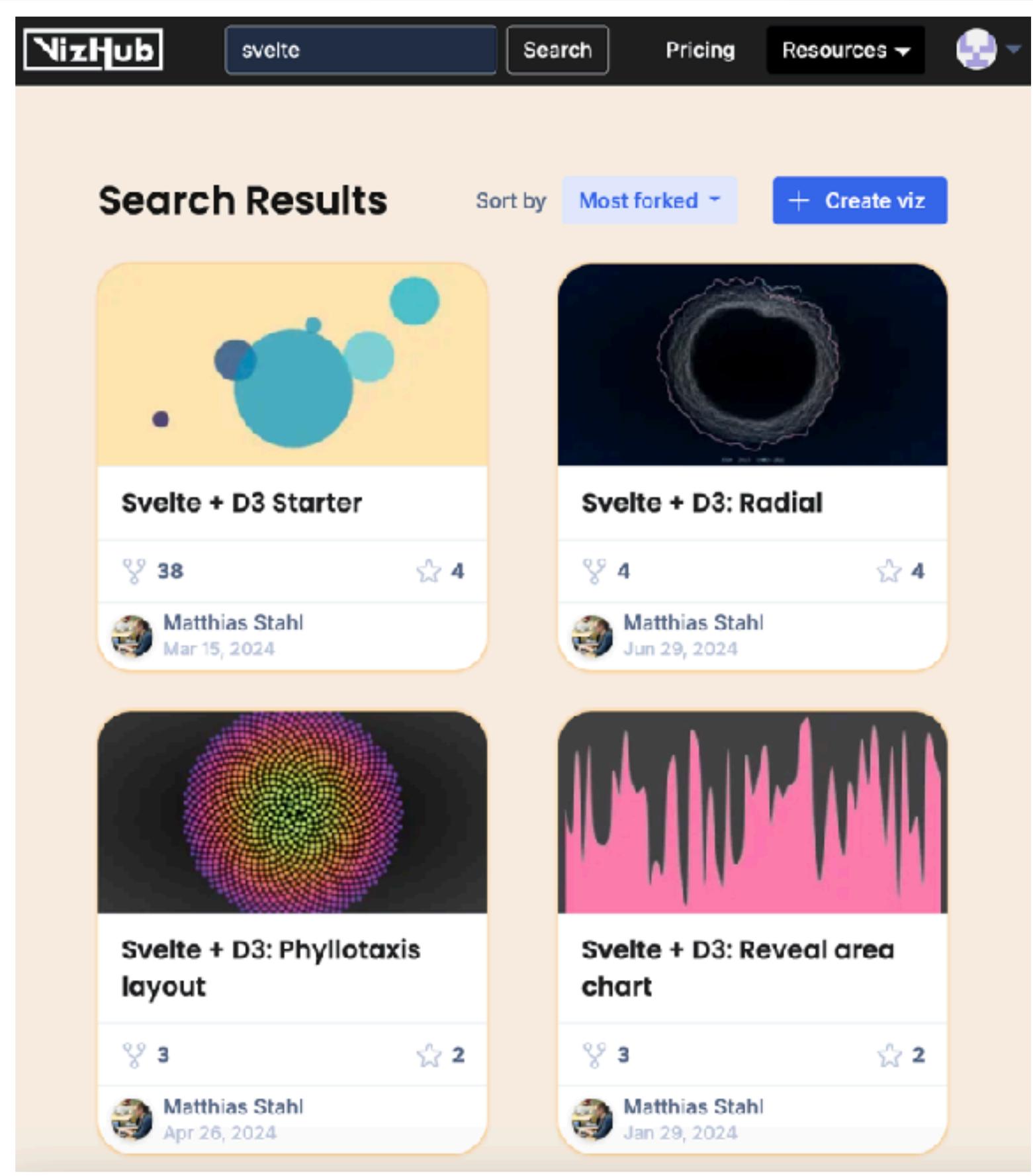
Learn.svelte.dev

(Amazing tutorial of Svelte + SvelteKit)

“Svelte and D3 training”

Matthias Stahl, YouTube
(in person in Utrecht in November)

Getting started



Vizhub

This demo was on VizHub - a platform for creating, sharing, and collaborating on interactive data visualizations.

It is perfect for **data cuckoo-ing** - taking other people's visualisations and adding your own data to them.

Viz Software

Static

Interactive

Viz Software

RAWGraphs



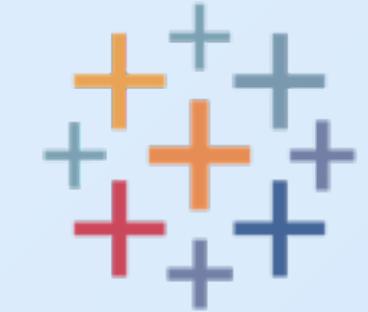
Static

Datawrapper



Flourish

Interactive



+ a b l e a u



Viz Software

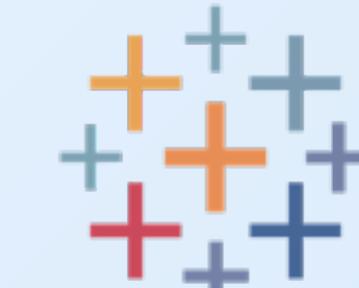
RAWGraphs

Datawrapper

Static

Simple

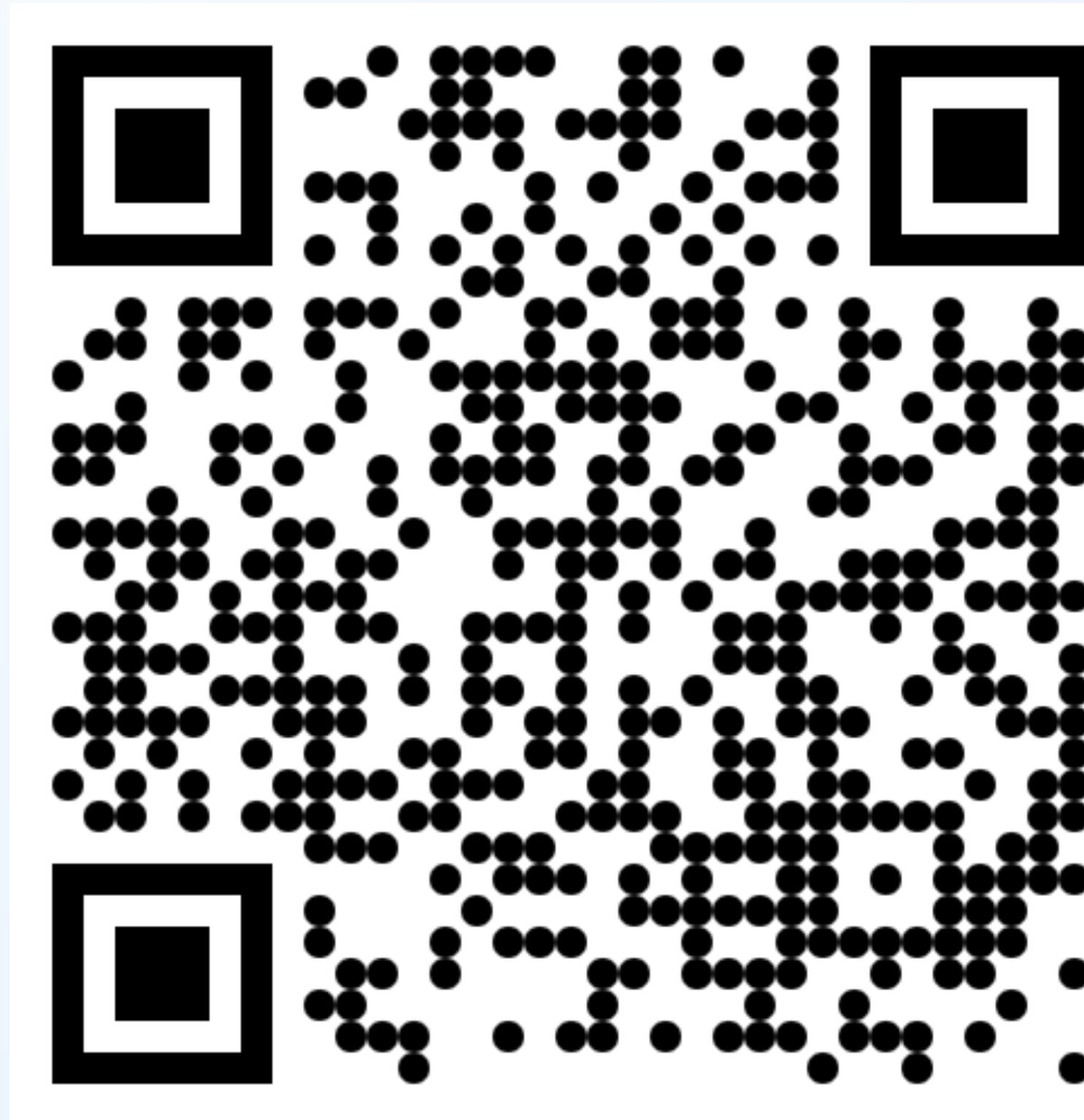
Complex



+ a b l e a u



... and finally, a plug



Does this sound like something you or your organisation needs?
Get in touch!

I also give trainings to data scientists on how to communicate data...

...And to designers in how to effectively work with data