

stories about algorithm ethics.  
the BAMF case.

johanna hartmann

# idea

one case this term

case: based in Europe

interaction: slowly revealing  
informations

interaction: explain to people who  
are not familiar with topic

# case: BAMF arabic dialect recognition



The image shows a presentation slide for the 'Digitalisierungsagenda 2020' of the Federal Office for Migration and Refugees (BAMF). The slide has a blue header and footer area and a white central content area. In the top left corner of the white area, the BAMF logo is displayed, featuring a stylized eagle above a horizontal bar with the colors of the German flag (black, red, and gold). To the right of the logo, the text 'Bundesamt für Migration und Flüchtlinge' is written. The main title 'Digitalisierungsagenda 2020' is centered in a large, dark font. Below the title, a subtitle reads 'Bisherige Erfolge und Ausblicke auf weitere digitale Projekte im Bundesamt für Migration und Flüchtlinge'. The bottom half of the slide features a photograph of a church tower with a tall, spire-like steeple against a clear blue sky.

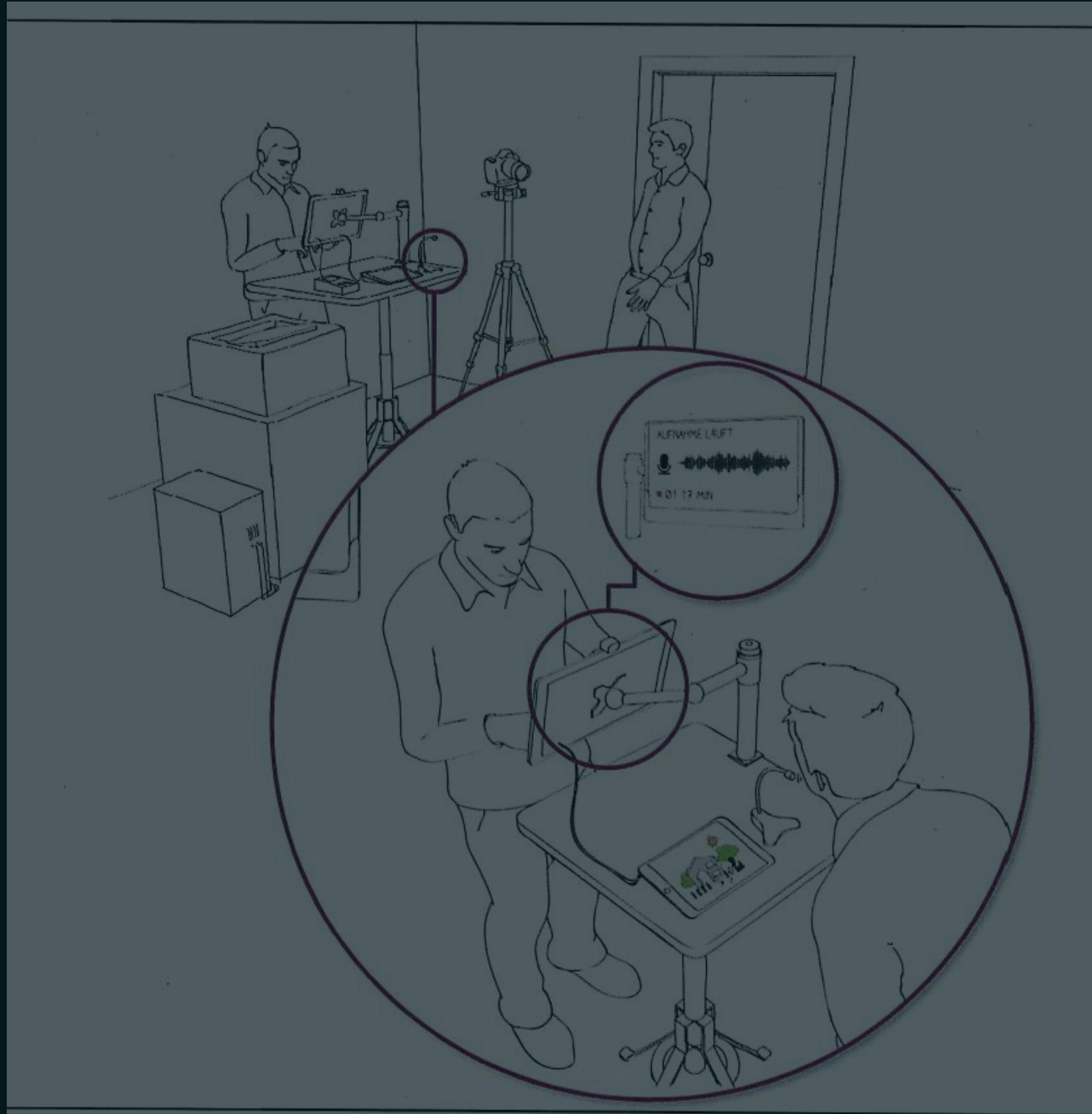
Bundesamt  
für Migration  
und Flüchtlinge

Digitalisierungsagenda 2020

Bisherige Erfolge und Ausblicke auf weitere digitale Projekte im  
Bundesamt für Migration und Flüchtlinge



# case: BAMF arabic dialect recognition



## Sprach-/Dialekterkennung (Wahrscheinlichkeit in %)

Arabisch Golf : 76.1% (0.50 LLR)  
Arabisch Agyptisch : 10.8% (-0.92 LLR)  
Arabisch Levantinisch : 8.0% (-1.06 LLR)  
Andere Sprachen/Dialekte: 5.1%

## Aufnahme-Details:

Aufnahme-Dauer: 111.1s  
Netto Sprachdauer: 54.94s

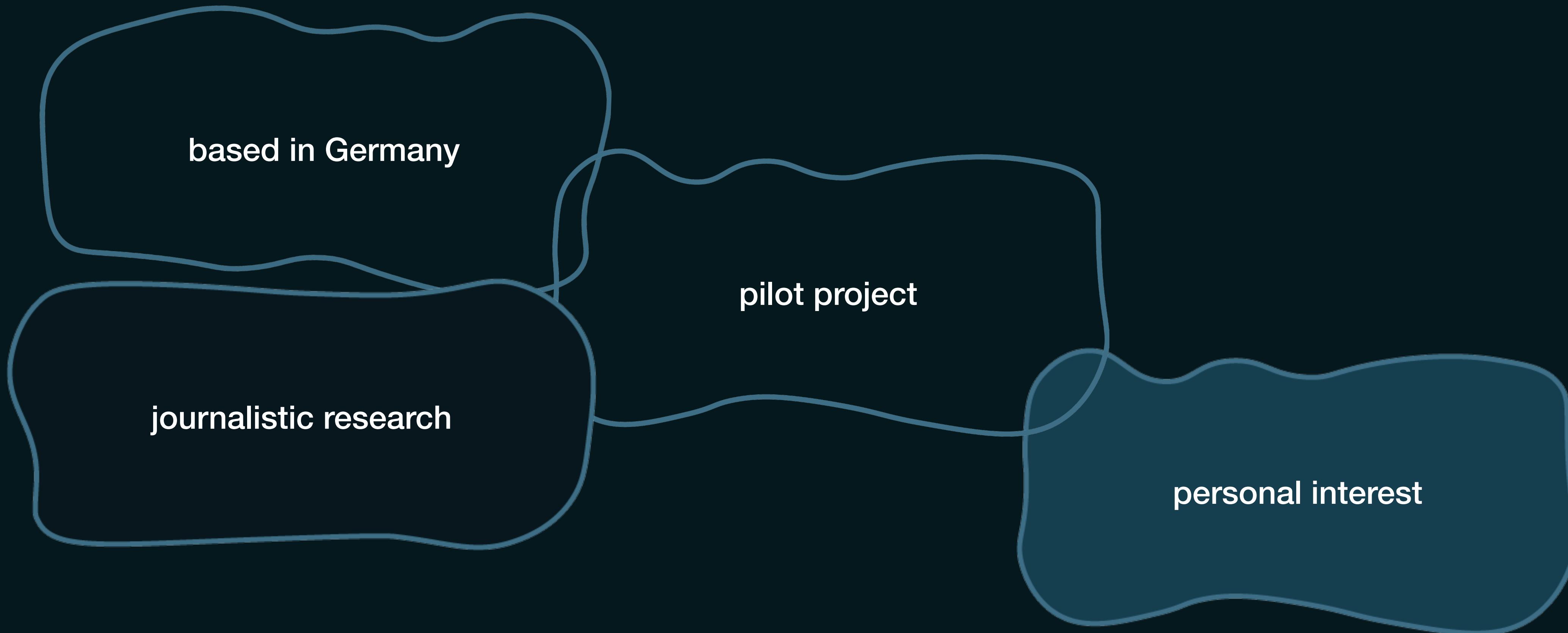
## Technische Details:

Rauschabstand (SNR): 34.151565  
Speech level: 5.539052  
Saturation level: 0.0  
Anzahl der Sprecher: -1  
Segmentation score: -5.0  
Gender score: -1.0

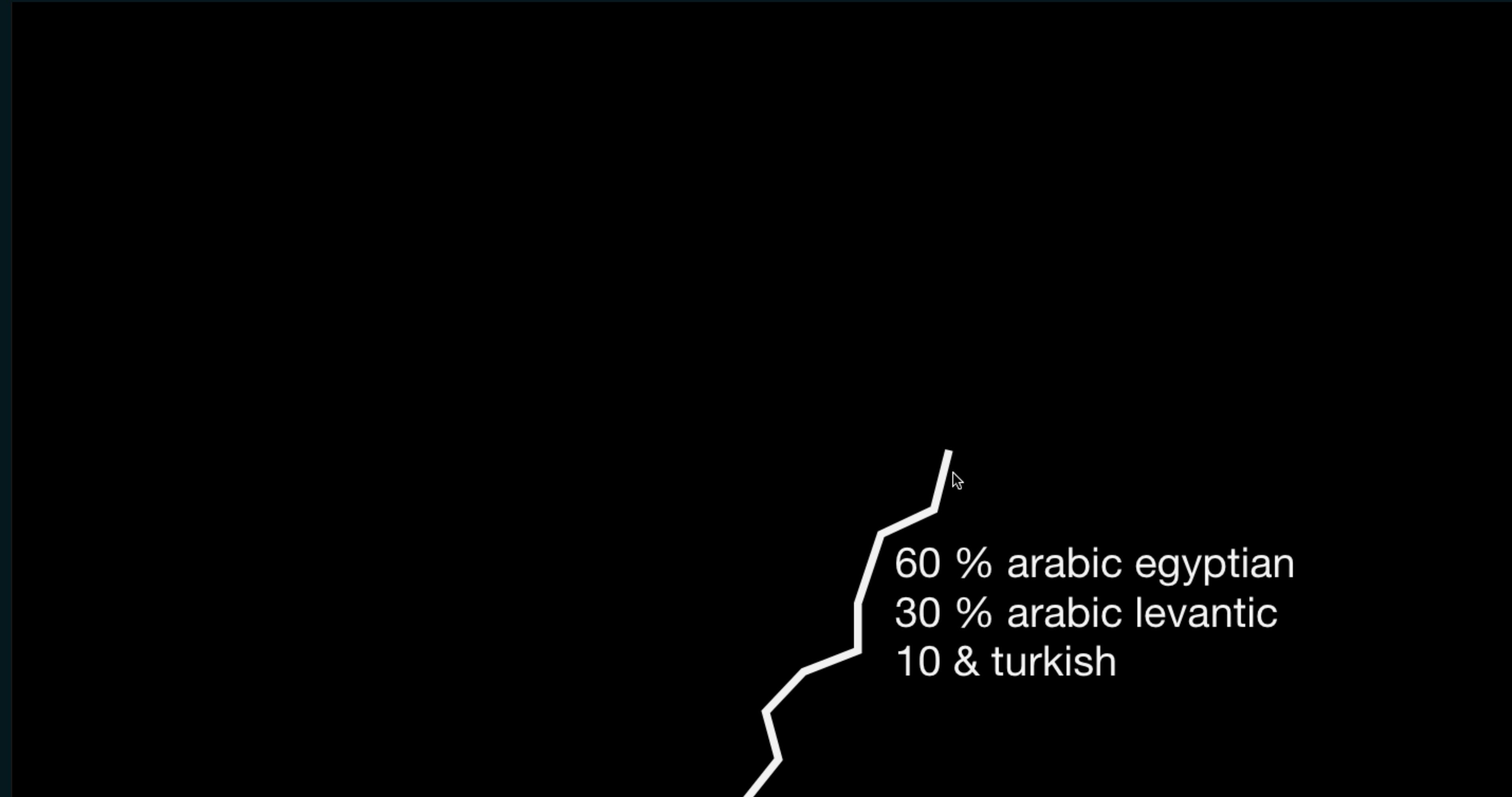
Nicht relevant

(LLR: Log Likelihood Ratio - Wissenschaftliches Maß, mit dem die Wahrscheinlichkeit für eine Hypothese verglichen wird)

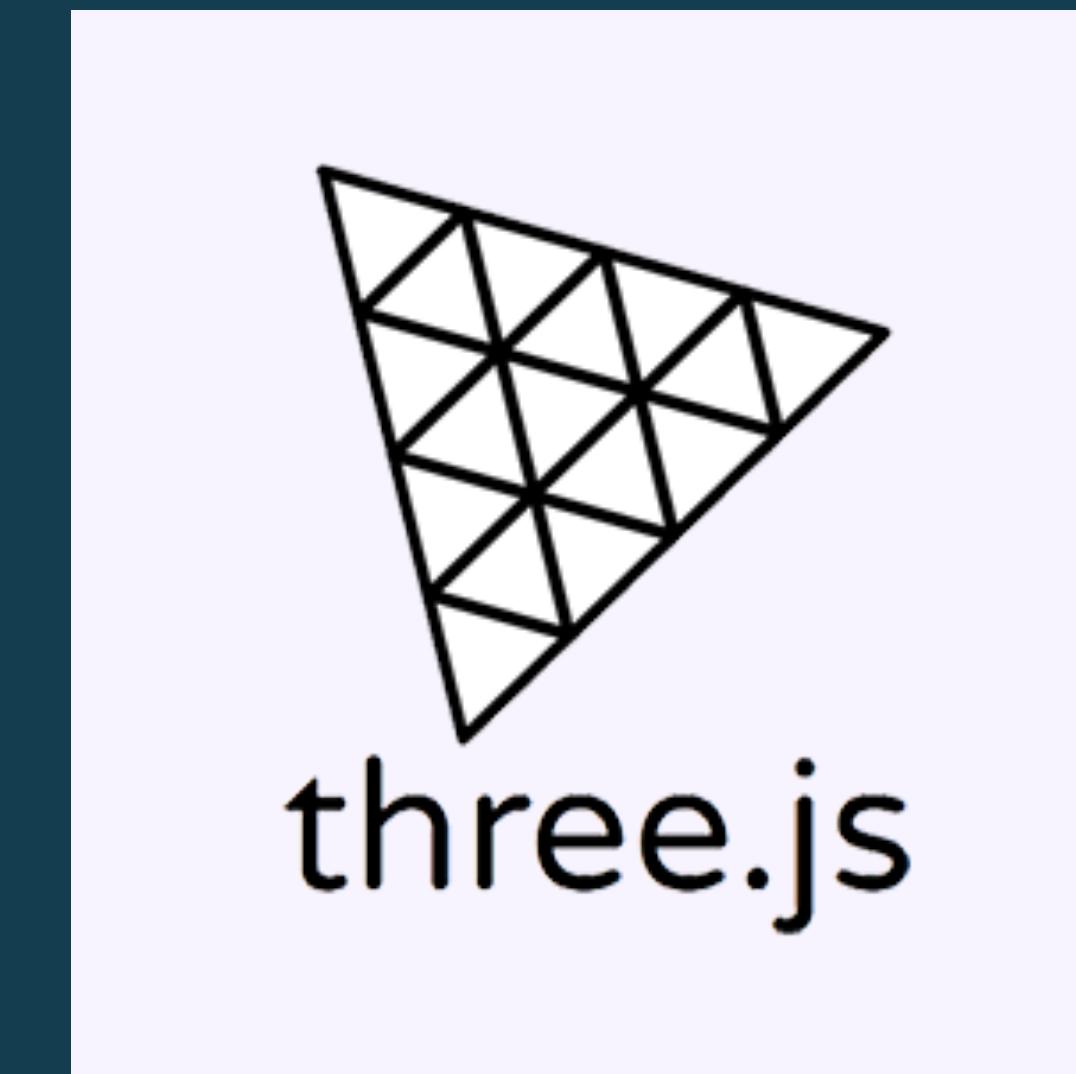
# reflection on choice



# concept & prototype



# technical choices



# technical choices

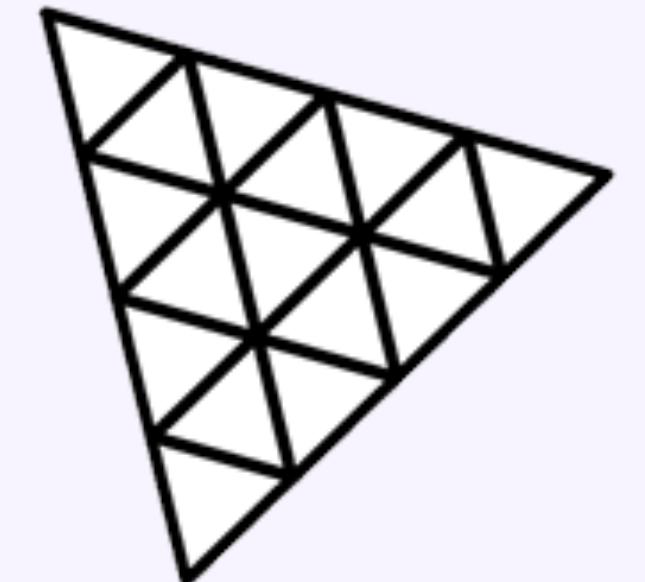


framework

easy to add up

maintenance

combined with js  
files

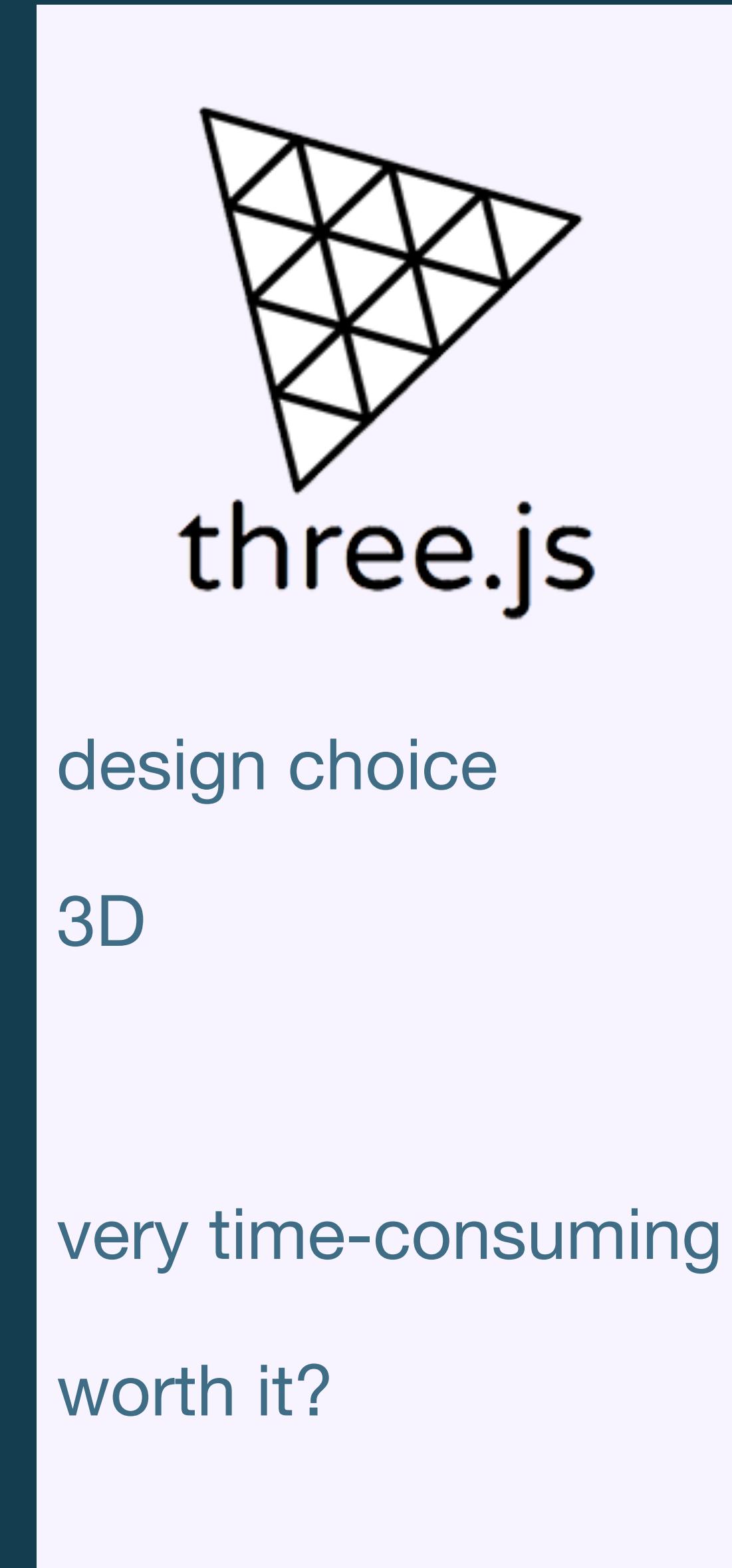


three.js

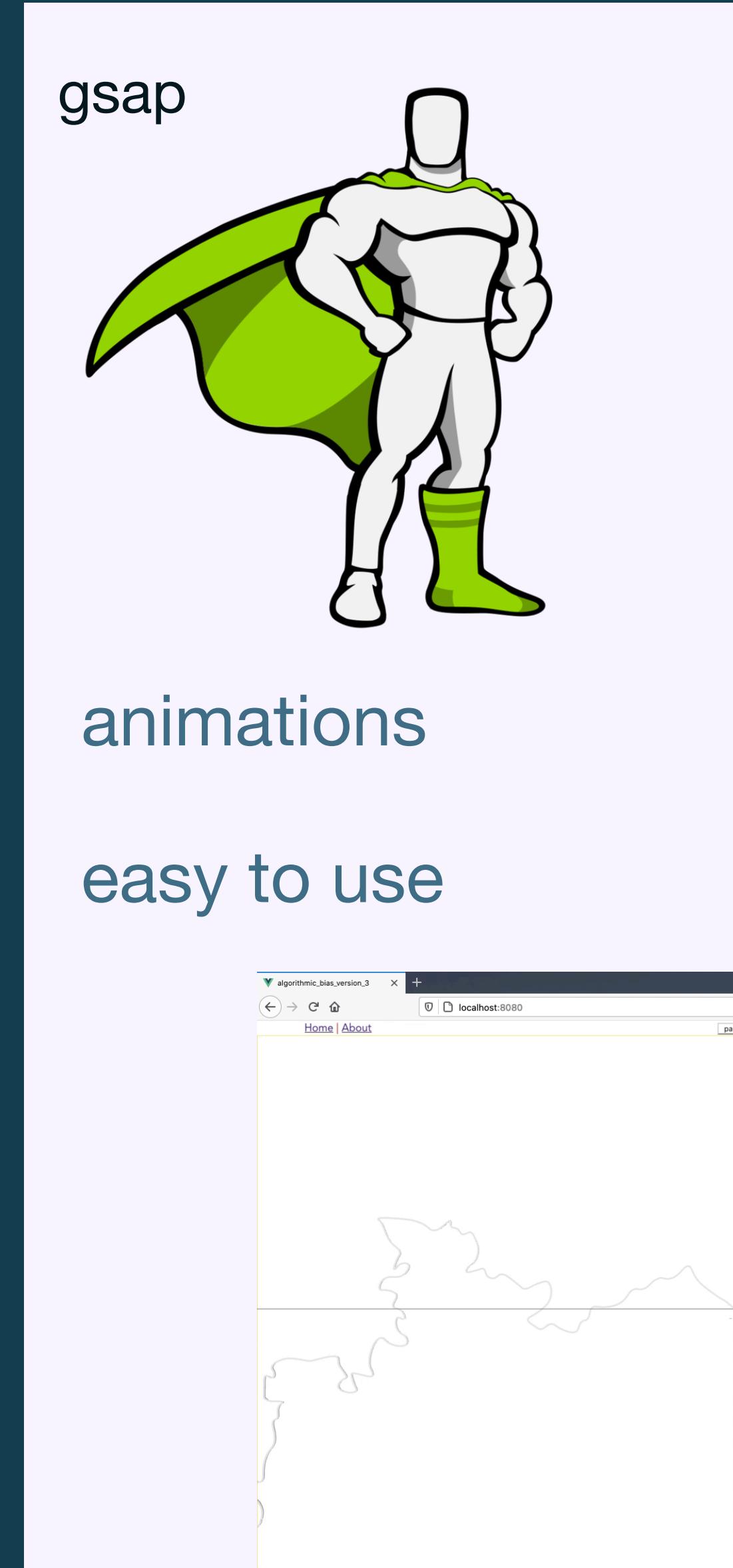
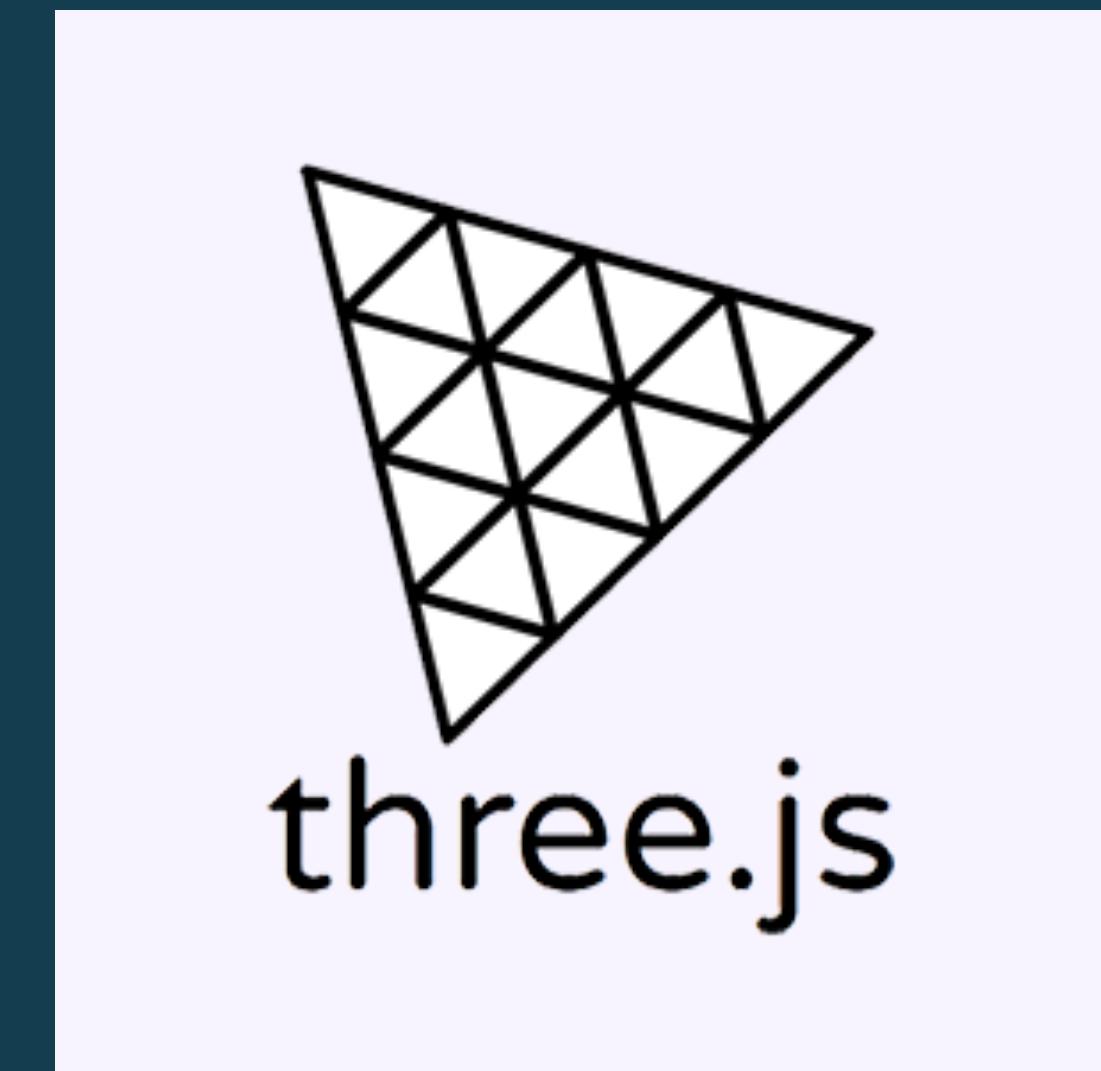
gsap



# technical choices



# technical choices



# some impressions

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**arabic dialect recognition algorithm**

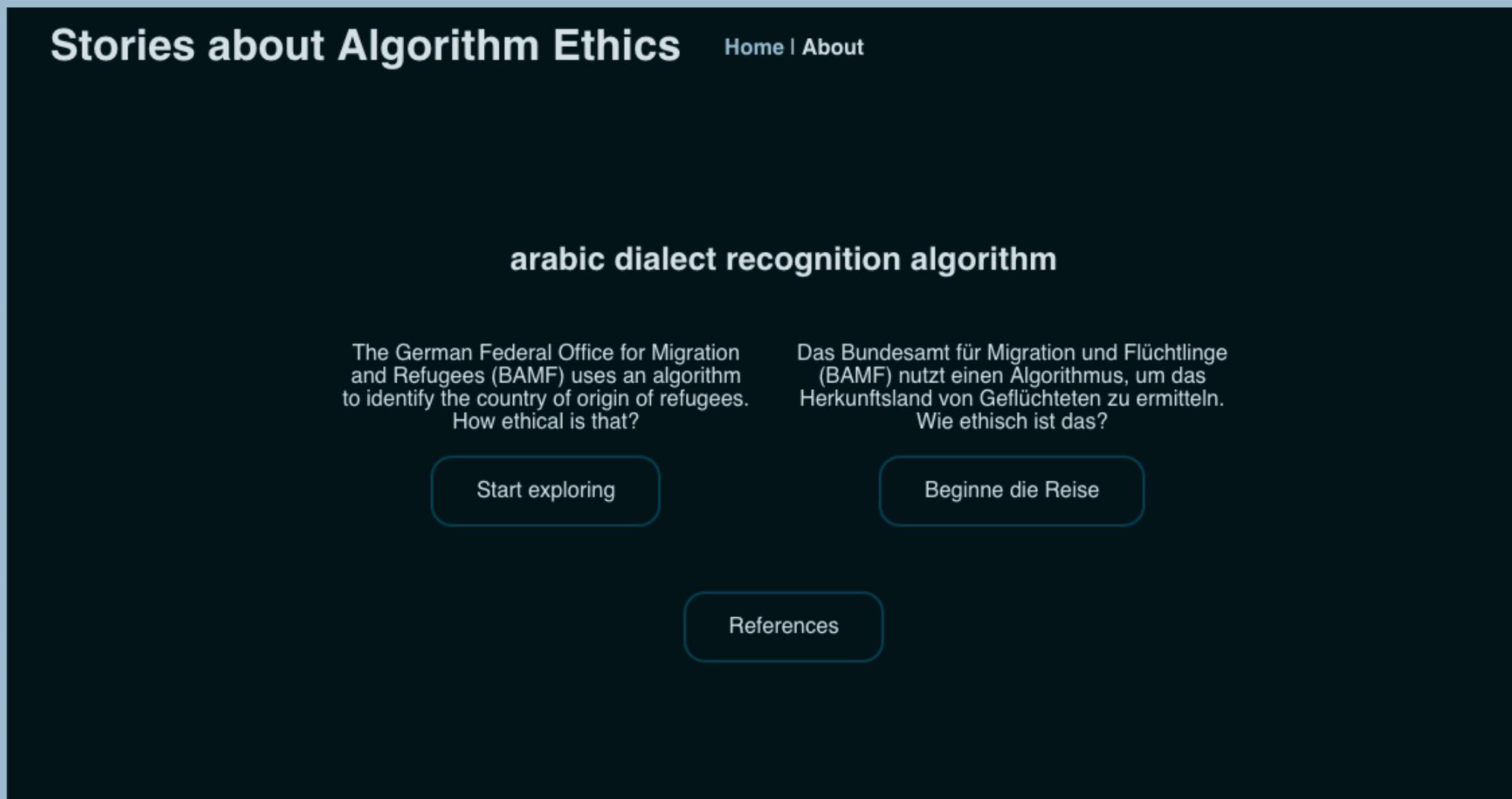
The German Federal Office for Migration and Refugees (BAMF) uses an algorithm to identify the country of origin of refugees. How ethical is that?

Das Bundesamt für Migration und Flüchtlinge (BAMF) nutzt einen Algorithmus, um das Herkunftsland von Geflüchteten zu ermitteln. Wie ethisch ist das?

[Start exploring](#)

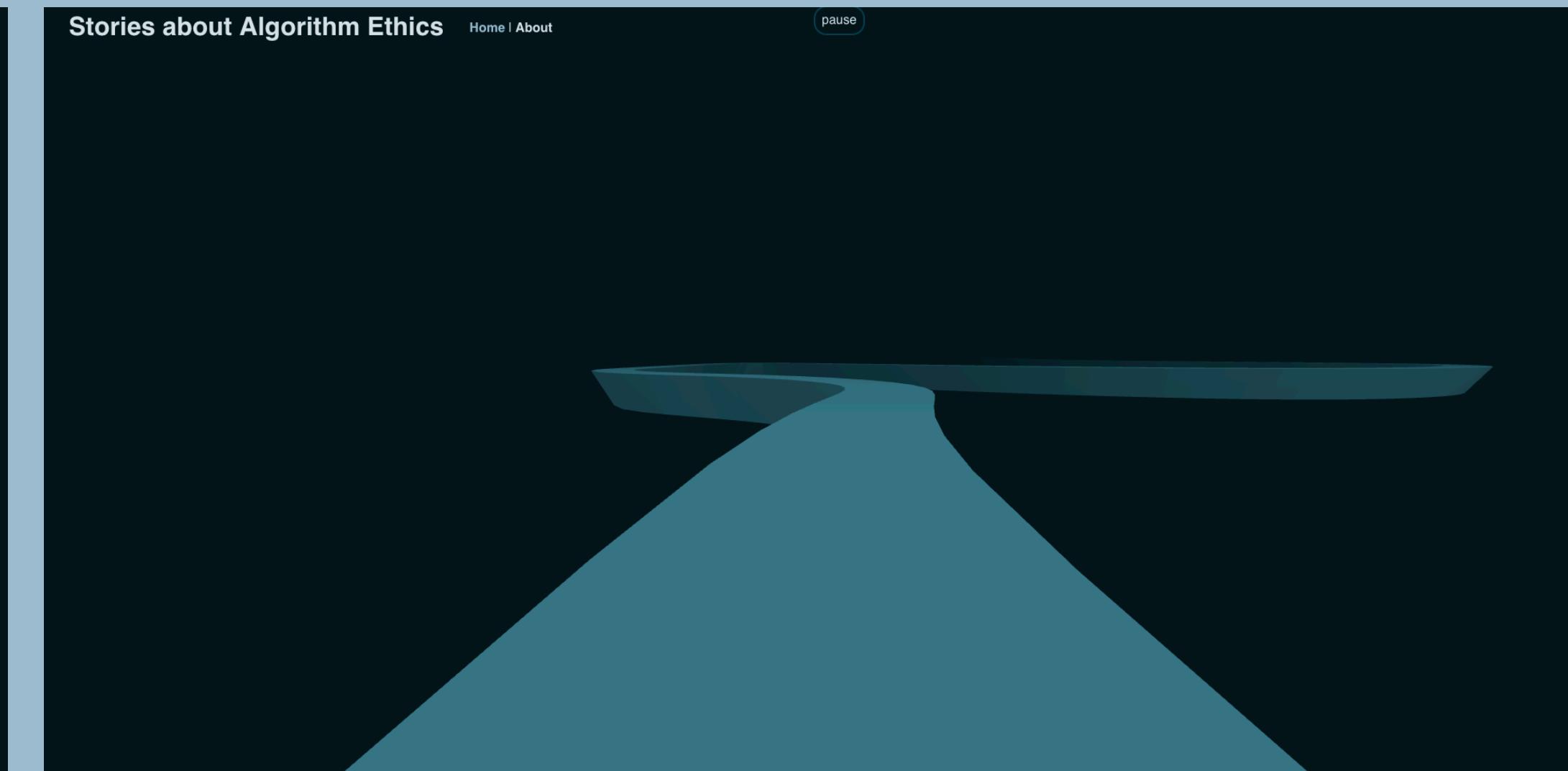
[Beginne die Reise](#)

[References](#)



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 pause



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 pause

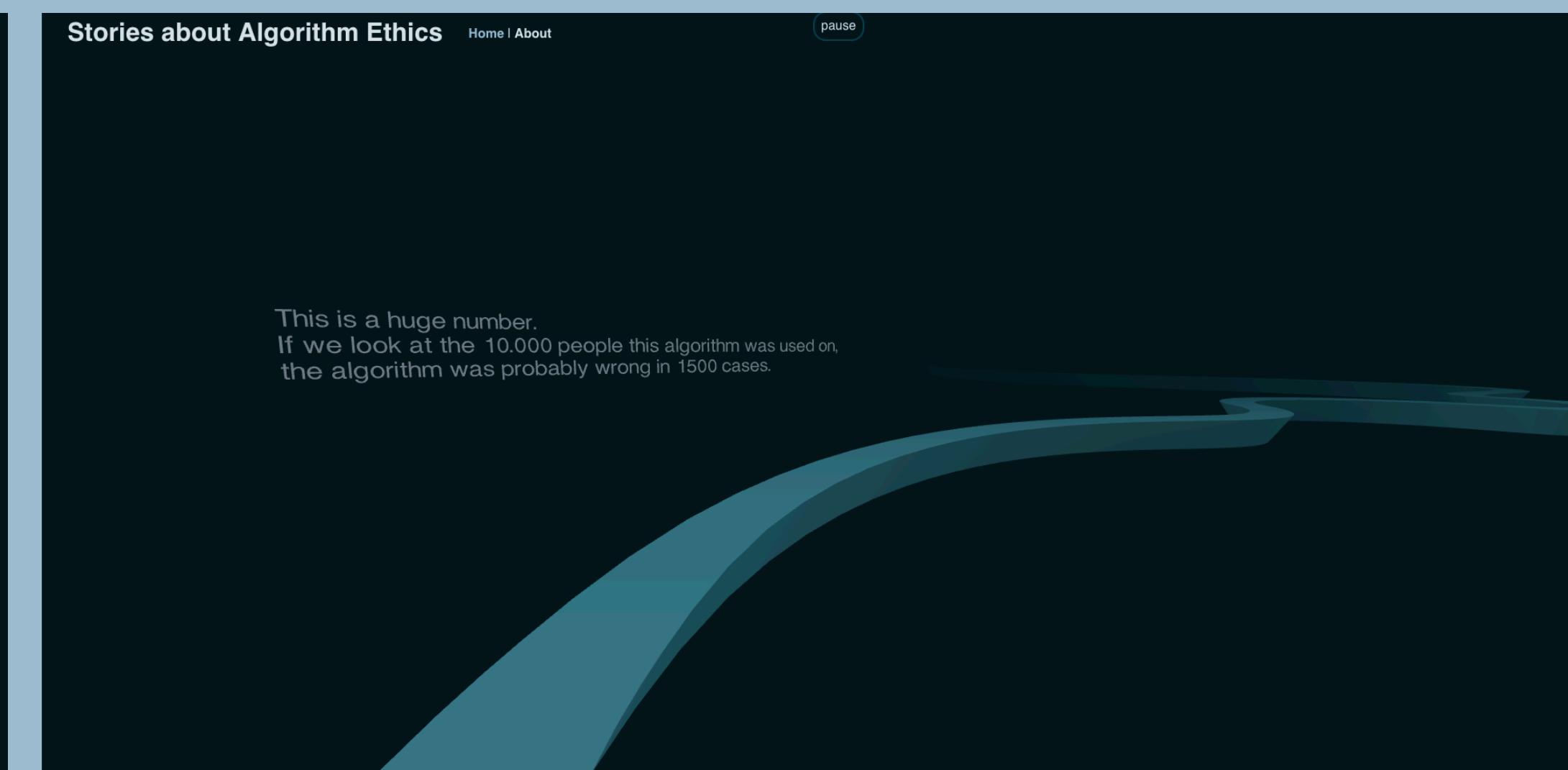
Since 2017, the algorithm was used over 10,000 times across Germany.



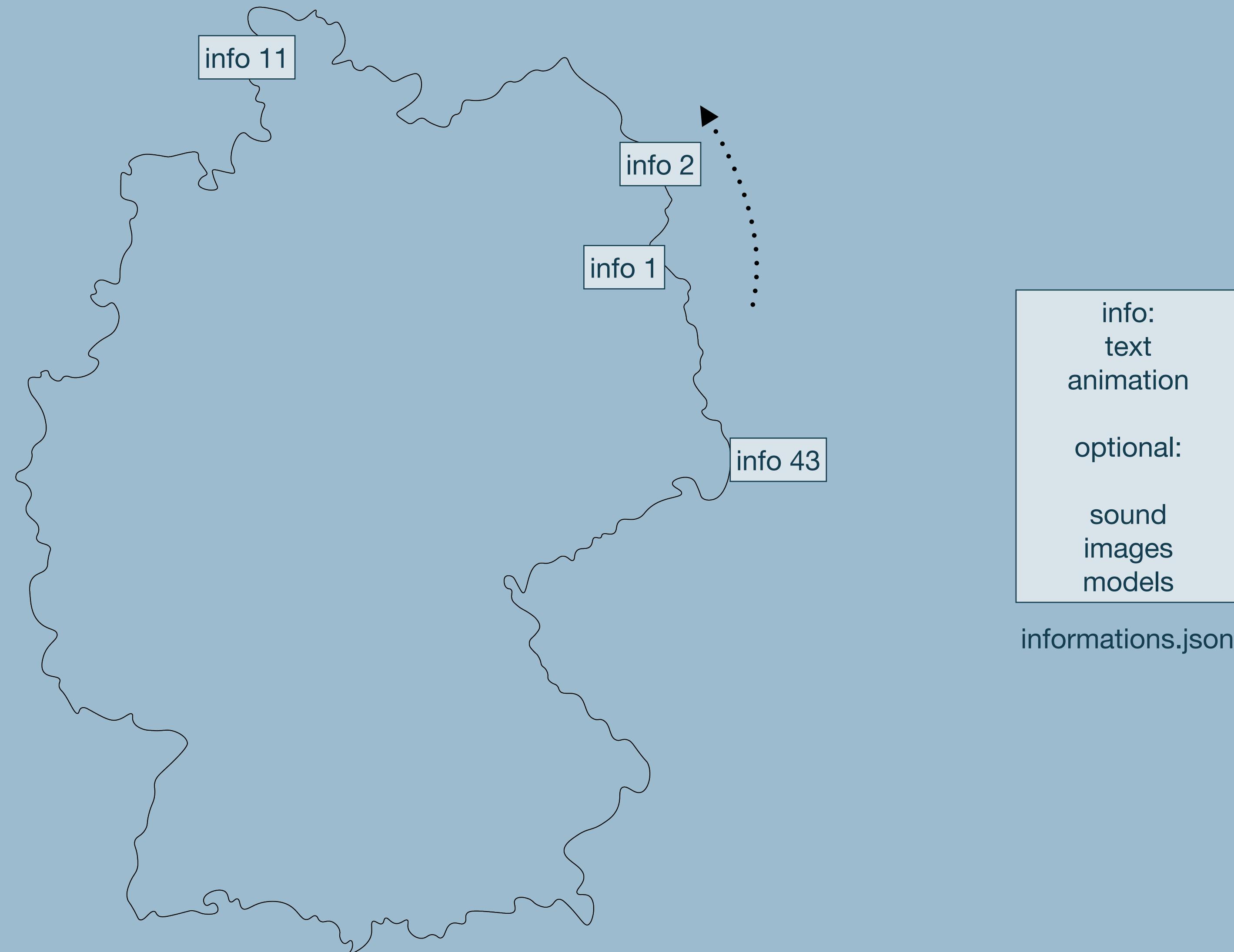
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 pause

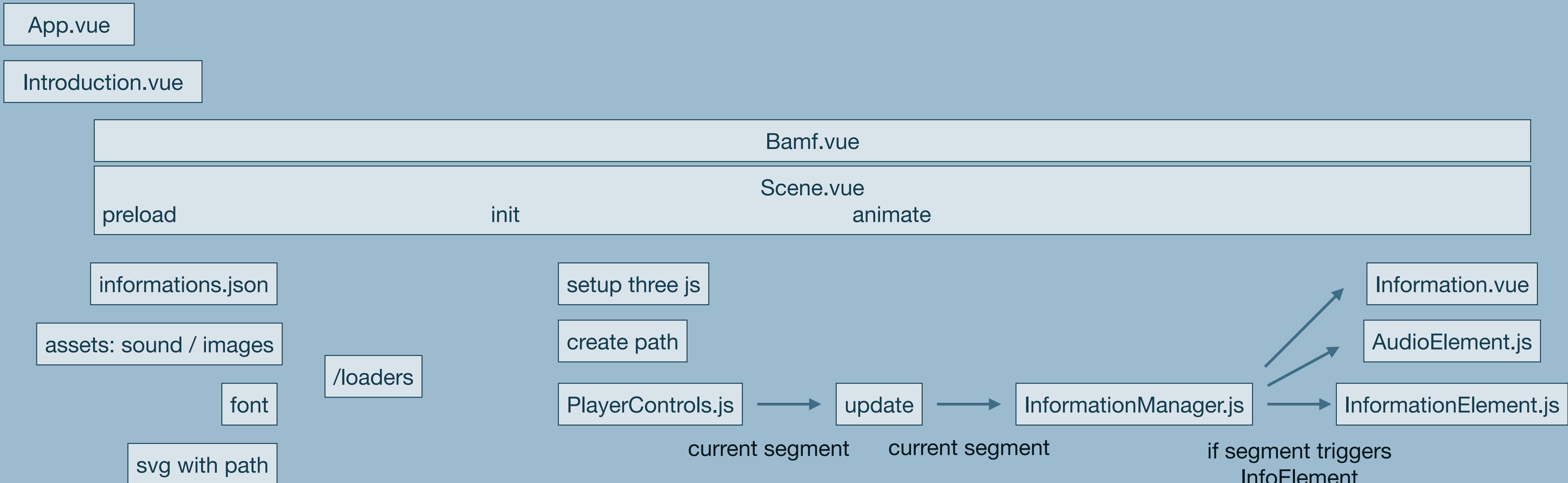
This is a huge number.  
If we look at the 10,000 people this algorithm was used on, the algorithm was probably wrong in 1500 cases.



# structure



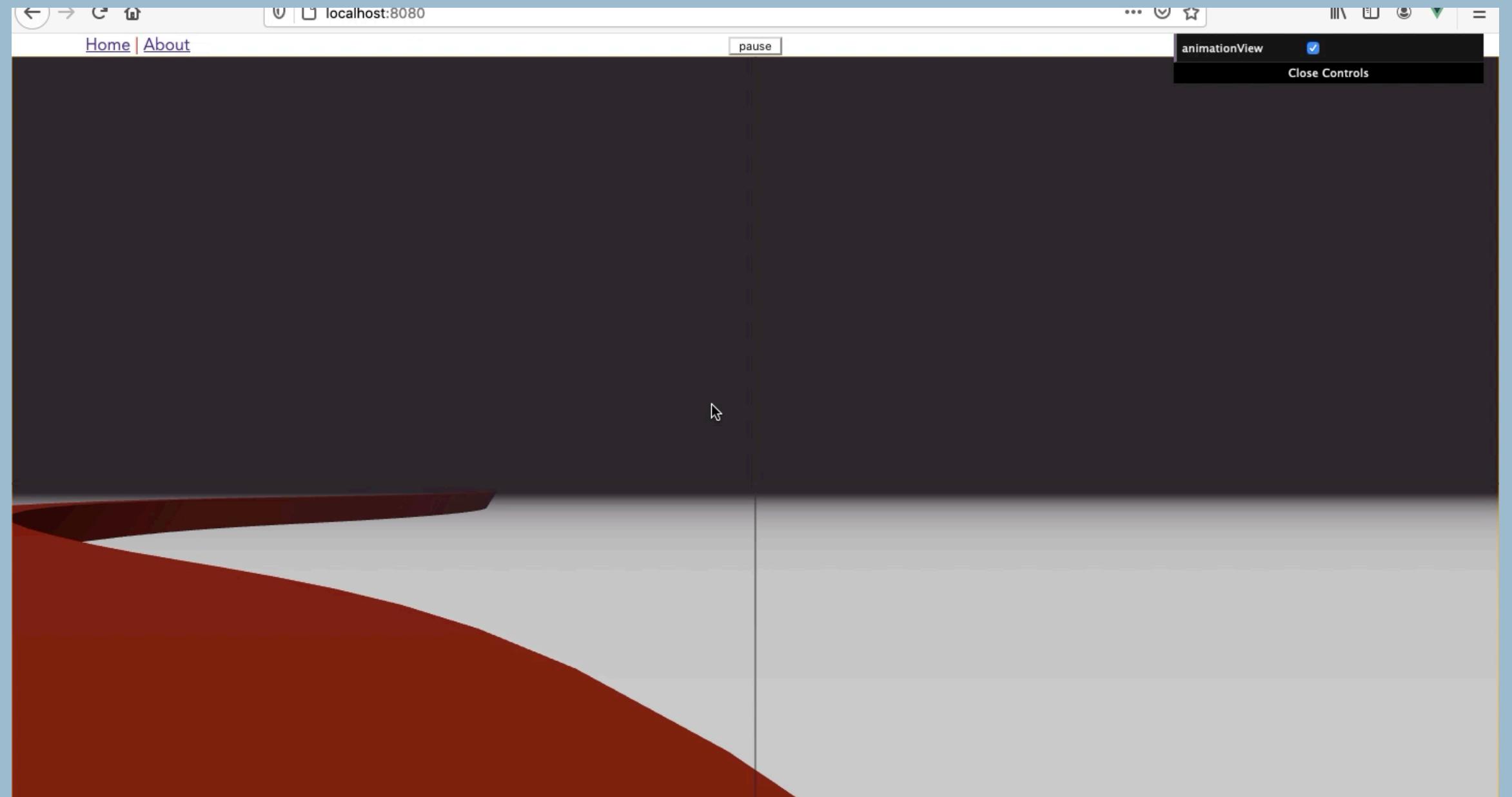
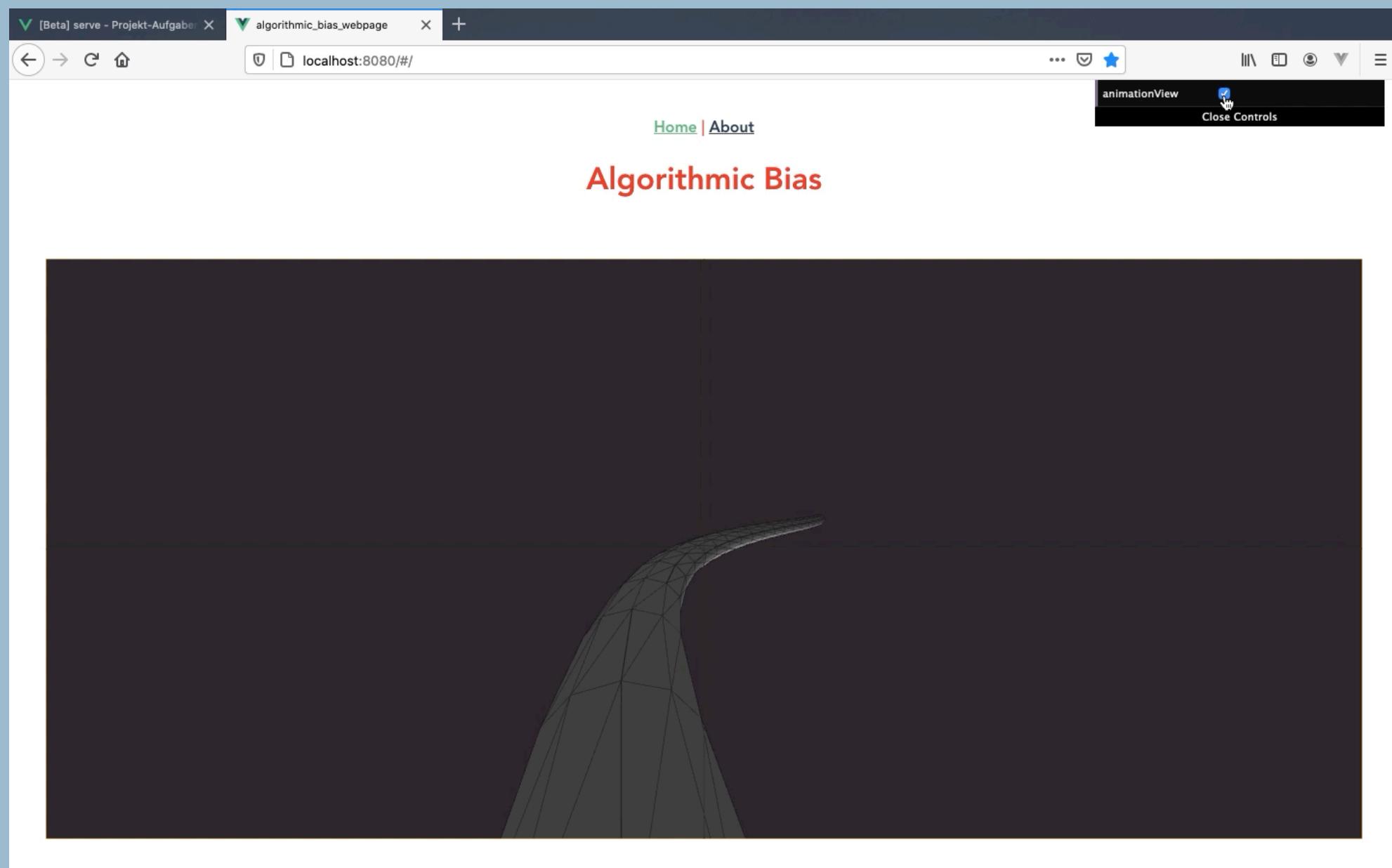
# structure



# controls: process

following path & rotate with the mouse

important part, but very timeconsuming part



# controls: process

following path & rotate with the mouse

important part, but very timeconsuming part

## following path

using time & segments  
calculating tangents  
setting quaternion of camera



## rotating with the mouse

~~Orbit Controls~~

~~Pointer Lock Controls~~

~~own controls, Pointer Lock API~~

own controls, Euler Angles

# controls: process

following path & rotate with the mouse

important part, but very timeconsuming part

## following path

using time & segments  
calculating tangents  
setting quaternion of camera



## rotating with the mouse

using window position  
calculating from eulers  
rotating towards quaternion

# documentation for details

The screenshot shows a Notion page with a dark theme. At the top, there's a header bar with a search icon, a 'Notion' logo, and a 'Search' input field. The main title 'documentation: first term project' is at the top left. The page features a large, stylized teal graphic of a brain-like shape with wavy lines. Overlaid on this graphic are the text 'stories about algorithm ethics.' and 'the BAMF case.' in white, and the name 'johanna hartmann' in a smaller white font.

## documentation: first term project

Welcome to the documentation of my first term project.  
The final project can be viewed here: <https://frosty-sinoussi-152bdb.netlify.app>  
To run the development version locally: download my repo and execute those commands and open localhost:8080

```
cd algorithmic_bias_webpage  
npm install  
npm run serve
```

### progress 2021 / coding diary

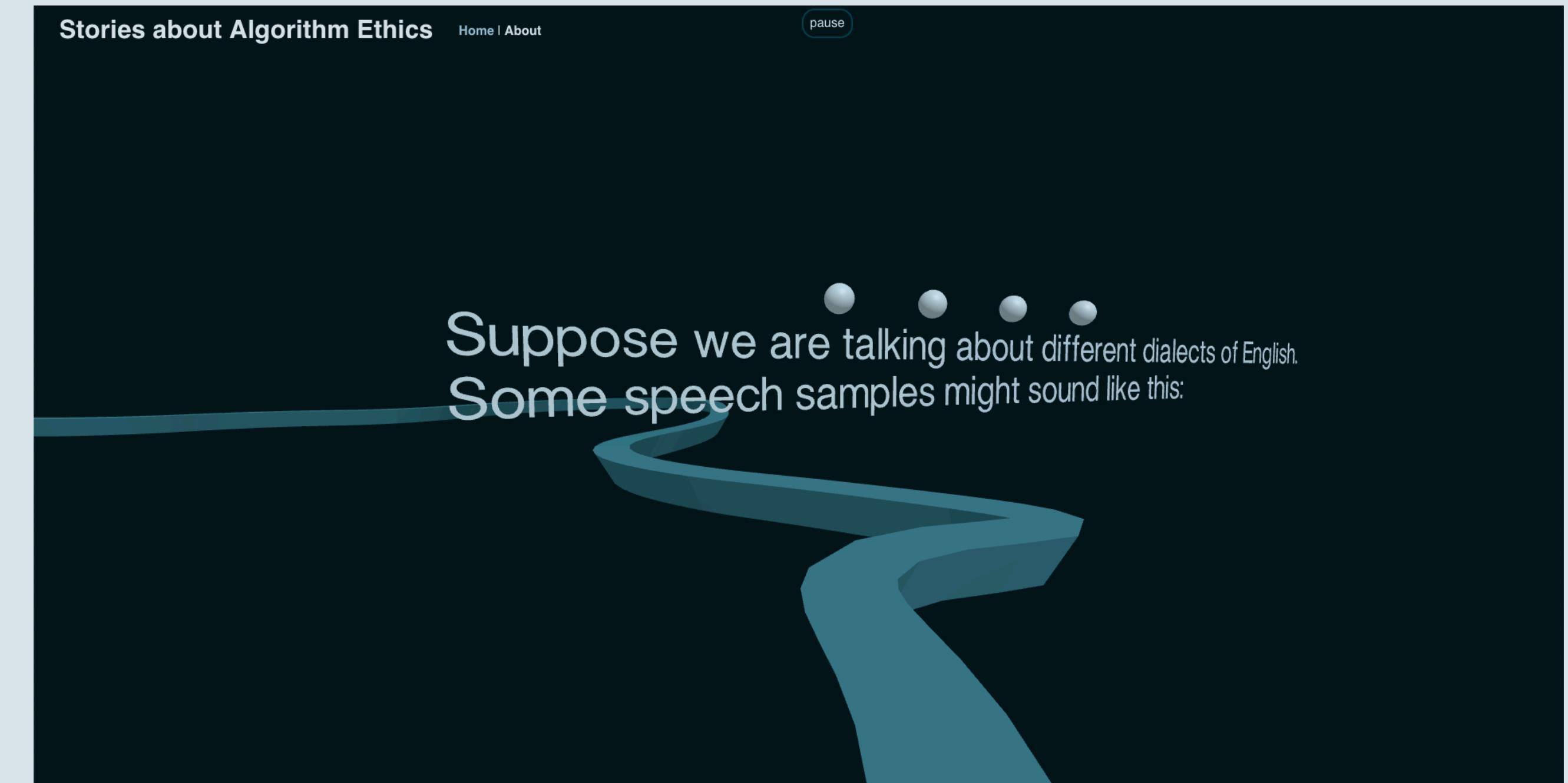
🔥 progress 2021 / coding diary

here you can find the most information about the progress of my project this year. Here are all the details (and problems) from implementing and designing as well as project screenshots from in between and important milestones.

# data vizualisation

dataset with Irish, Scottish, ...  
(CC4)

preview of data samples,  
not sound visualization



# visuals



# visuals

border as main element

lack of time: more  
minimalistic than anticipated

3D Models and Shaders

# conclusion

case and Information Elements

3D world

asynchronous  
programming

many ideas for final details:  
audio, animations, illustrations

more cases

# references

4: Biselli, Anna. (2018, August 20). Eine Software des BAMF bringt Menschen in Gefahr. Vice. <https://www.vice.com/de/article/a3q8wj/fluechtlinge-bamf-sprachanalyse-software-entscheidet-asy>

3: Bundesamt für Migration und Flüchtlinge. (2019). Digitalisierungsagenda 2020. <https://www.bamf.de/DE/Themen/Digitalisierung/Digitalisierungsagenda/digitalisierungsagenda-node.html>

4: Bundesamt für Migration und Flüchtlinge. (2017). Integriertes Identitätsmanagement - Plausibilisierung, Datenqualität und Sicherheitsaspekte. Einführung in die neuen IT-Tools. Schulung AVS-Mitarbeiter, Entscheider und Volljuristen [presentation slides]. <https://fragdenstaat.de/anfrage/foliensatze-und-interpretationshilfen-zu-sprachanalyse/>

17: pictures / visuals: Unsplash

other references of first term project are on the website

# live presentation