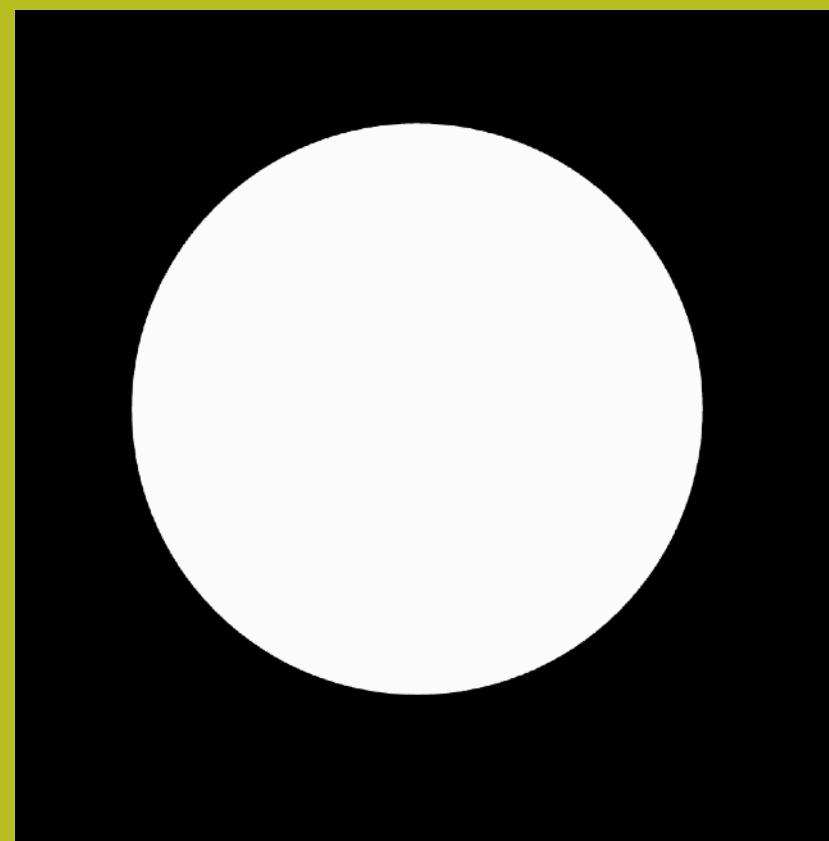


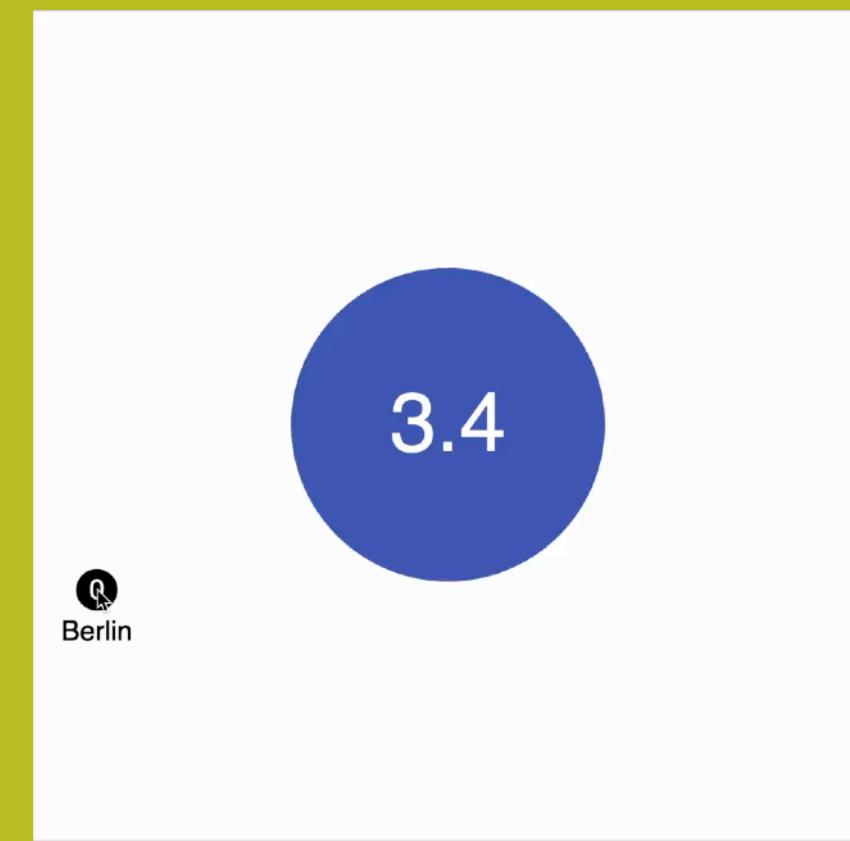
storytelling with data

session 2: coding

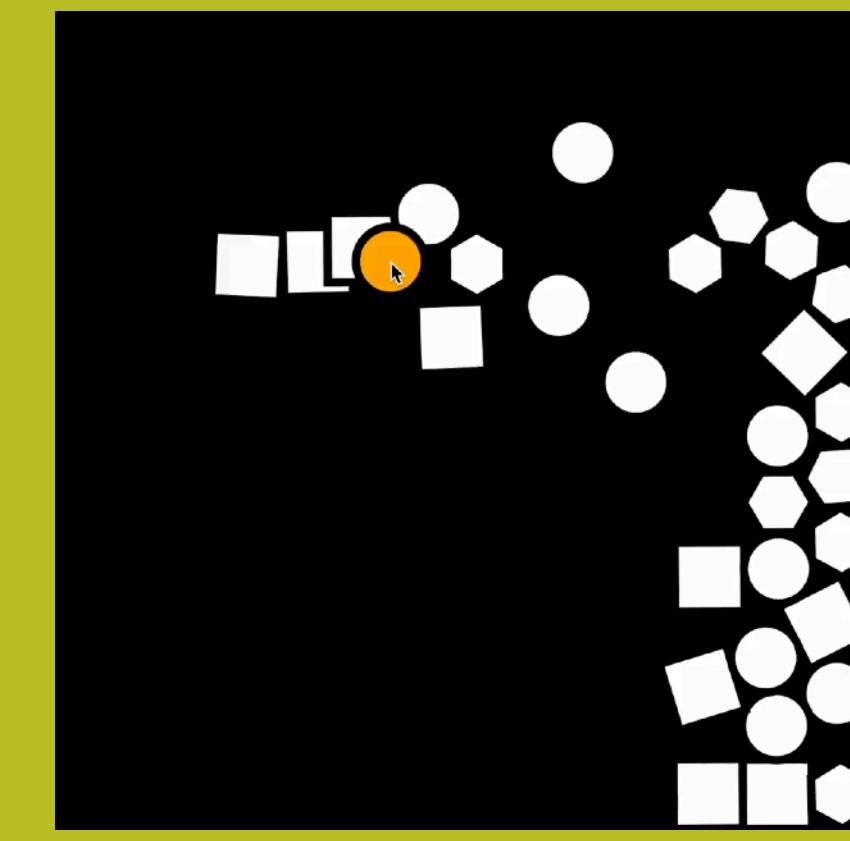
sound



tables

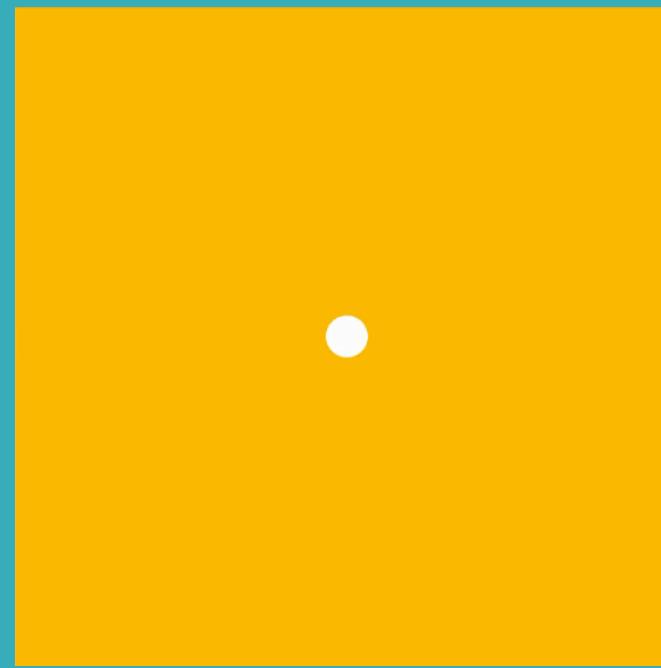
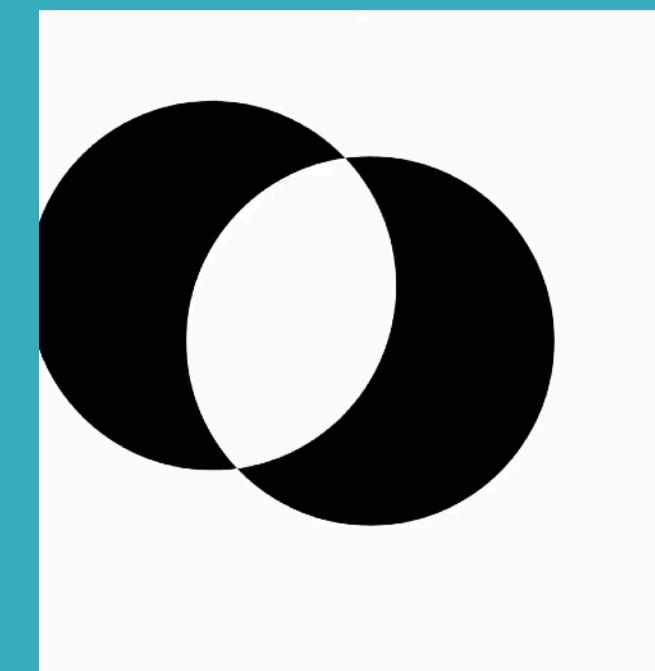
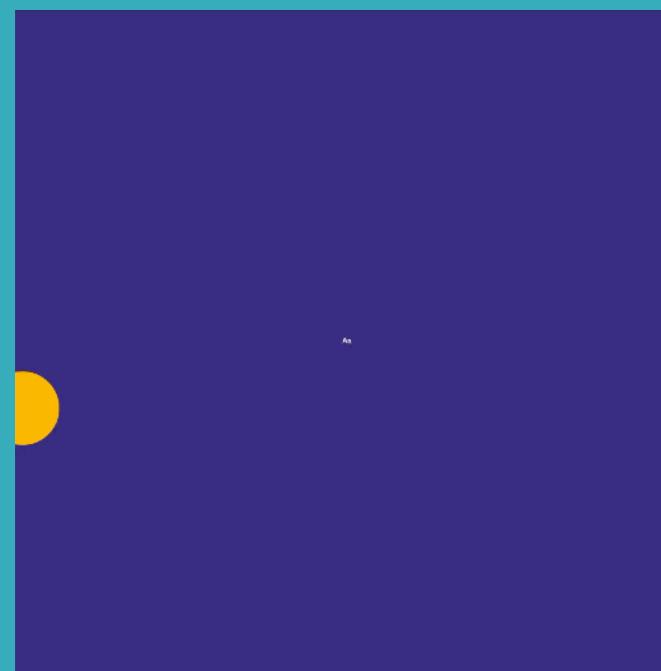


physics



download our code examples

basics



https://github.com/NahuelGerthVK/introduction_to_creative_coding

sound, tables, physics

storytelling-with-data Public

main · 1 Branch · 0 Tags

NahuelGerthVK code examples sound and tables

8cbd6e8 · now 1 Commit

File	Description	Last Commit
1-sound	code examples sound and tables	now
2-tables	code examples sound and tables	now
.gitignore	code examples sound and tables	now
dataviz-session-1.pdf	code examples sound and tables	now

Local Codespaces

Clone

HTTPS SSH GitHub CLI

gh repo clone NahuelGerthVK/storytelling-w...

Work fast with our official CLI. [Learn more](#)

Open with GitHub Desktop

Download ZIP

<https://github.com/NahuelGerthVK/storytelling-with-data>



visualizing sound

visualizing sound



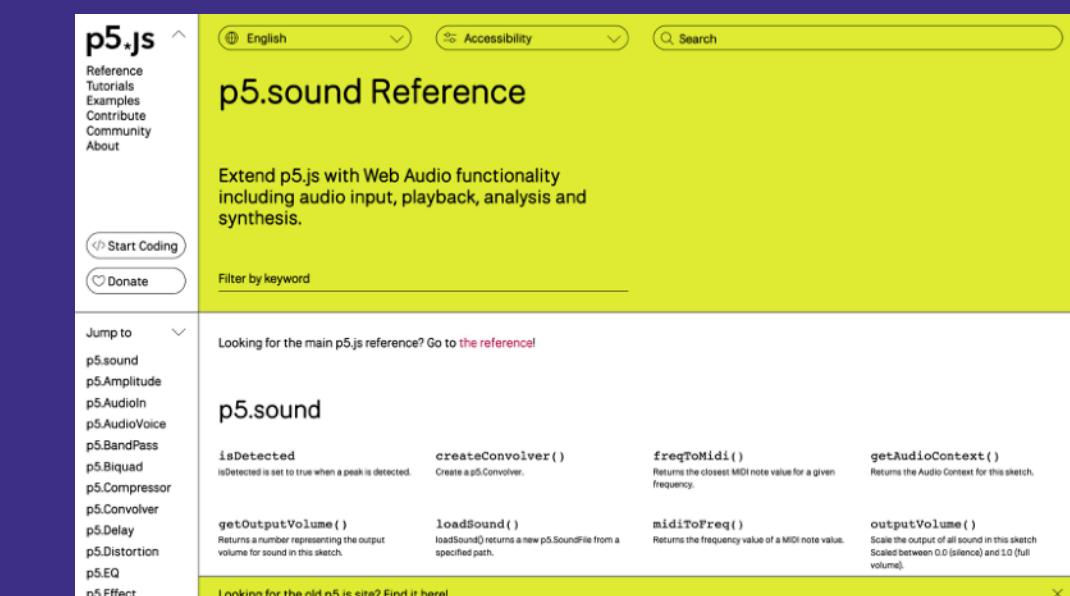
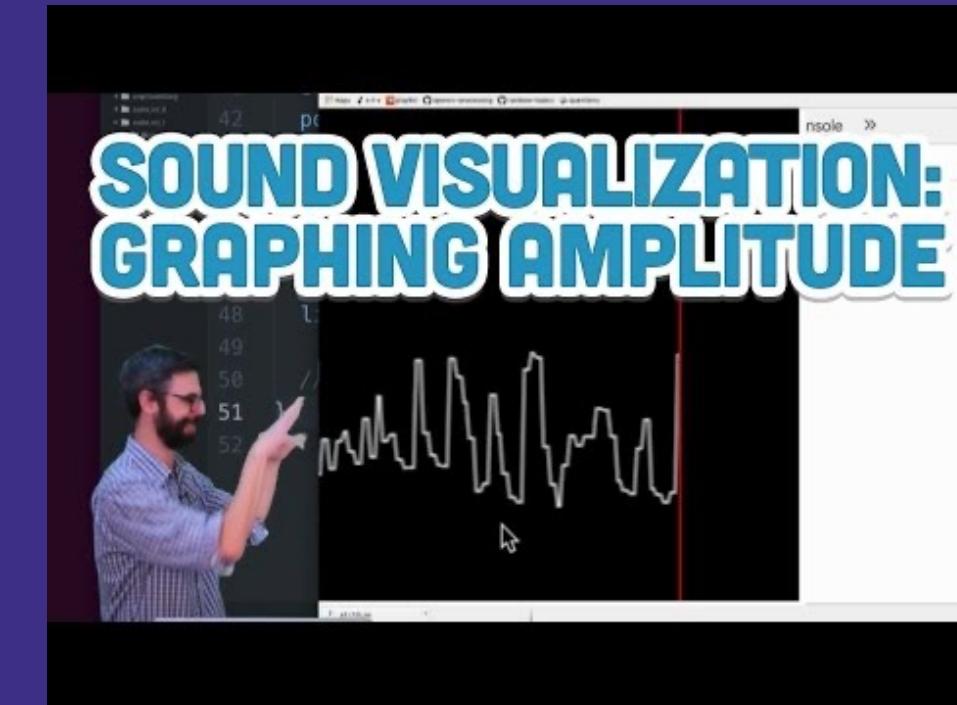
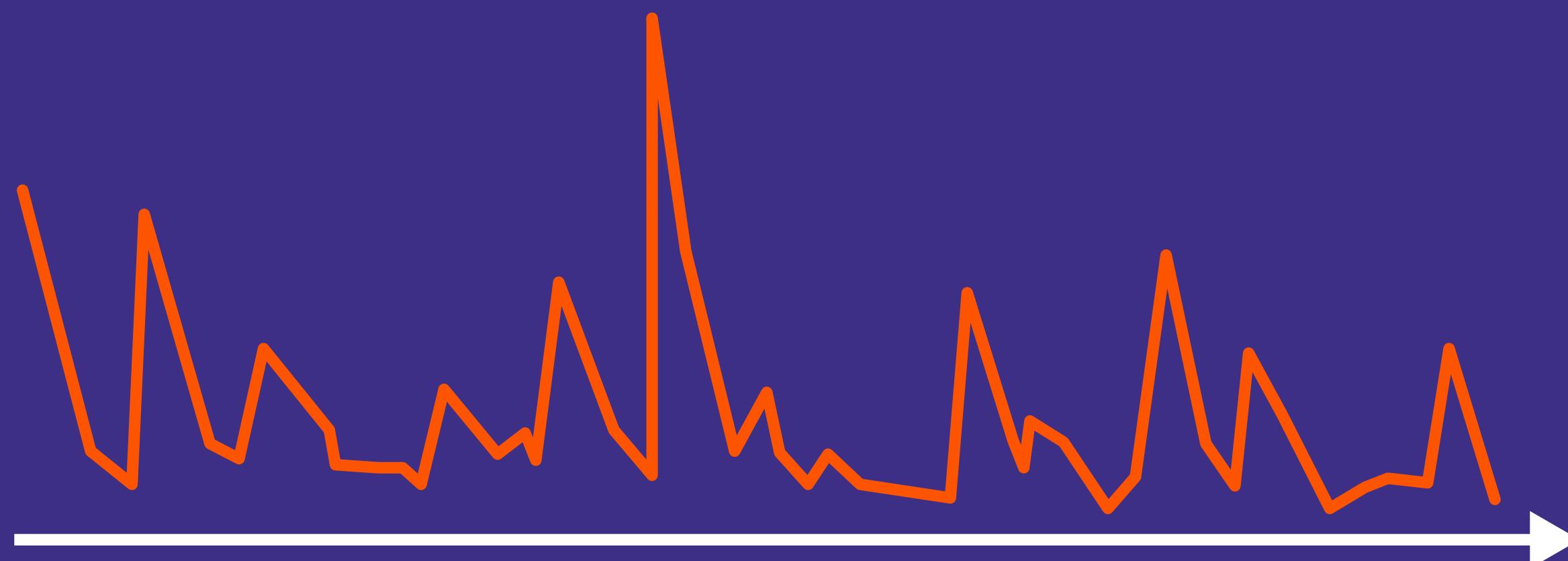
we can work with
the sound level
`getLevel()`



other things can react
to the level
e.g. the height or color of an object



resources

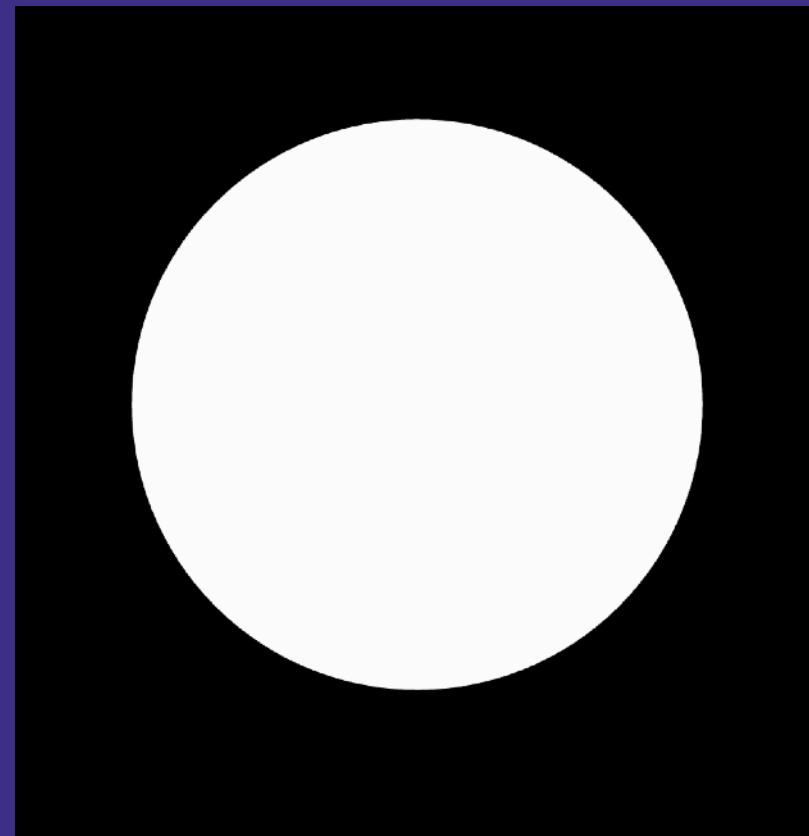


A screenshot of the p5.js reference page for the `p5.sound` library. The page has a yellow header bar with the title "p5.sound Reference". Below the header, there is a sidebar with links to "Reference", "Tutorials", "Examples", "Contribute", and "Community". The main content area contains a list of methods and functions, each with a brief description and code examples. Some of the listed methods include `getDetected()`, `createConvolver()`, `frequency()`, `getOutputVolume()`, `loadSound()`, `midimap()`, and `setAudioContext()`.

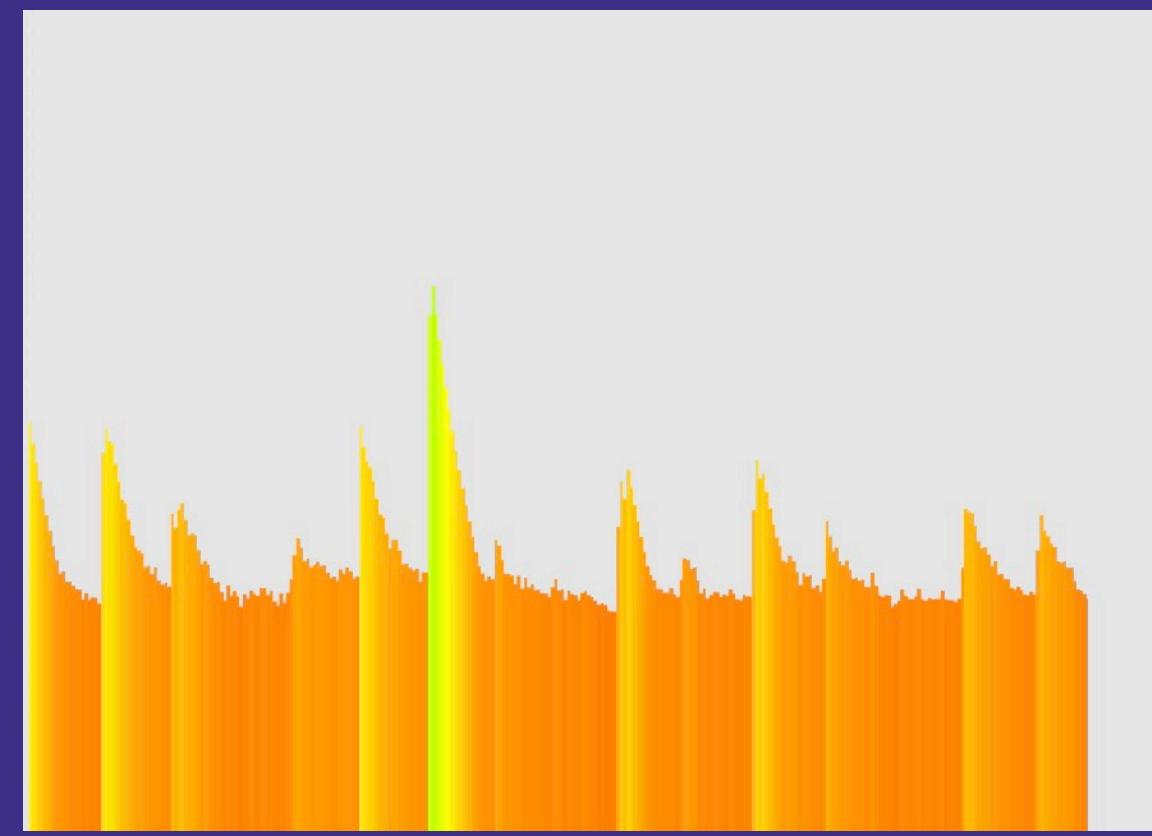
[https://www.youtube.com/watch?
v=jEwAMgcCgOA&ab_channel=TheCodingTrain](https://www.youtube.com/watch?v=jEwAMgcCgOA&ab_channel=TheCodingTrain)

<https://p5js.org/reference/p5.sound/>

code examples



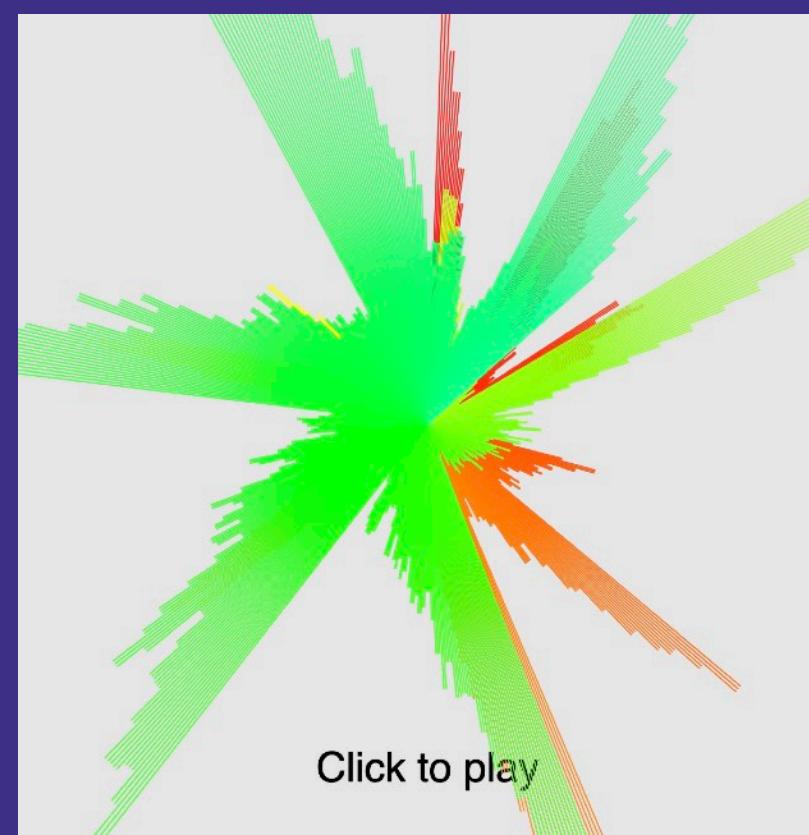
level = ellipse size



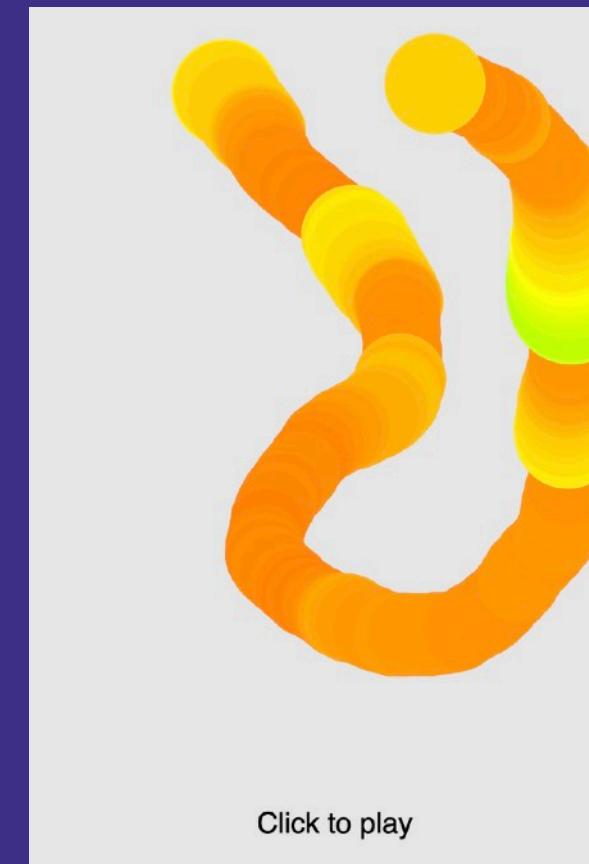
draw the graph with lines



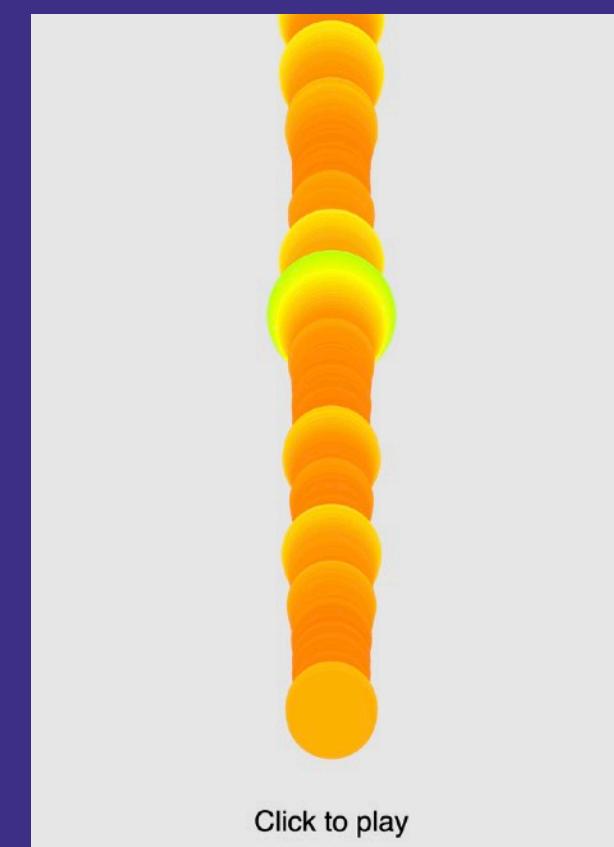
or ellipses



draw in a circle

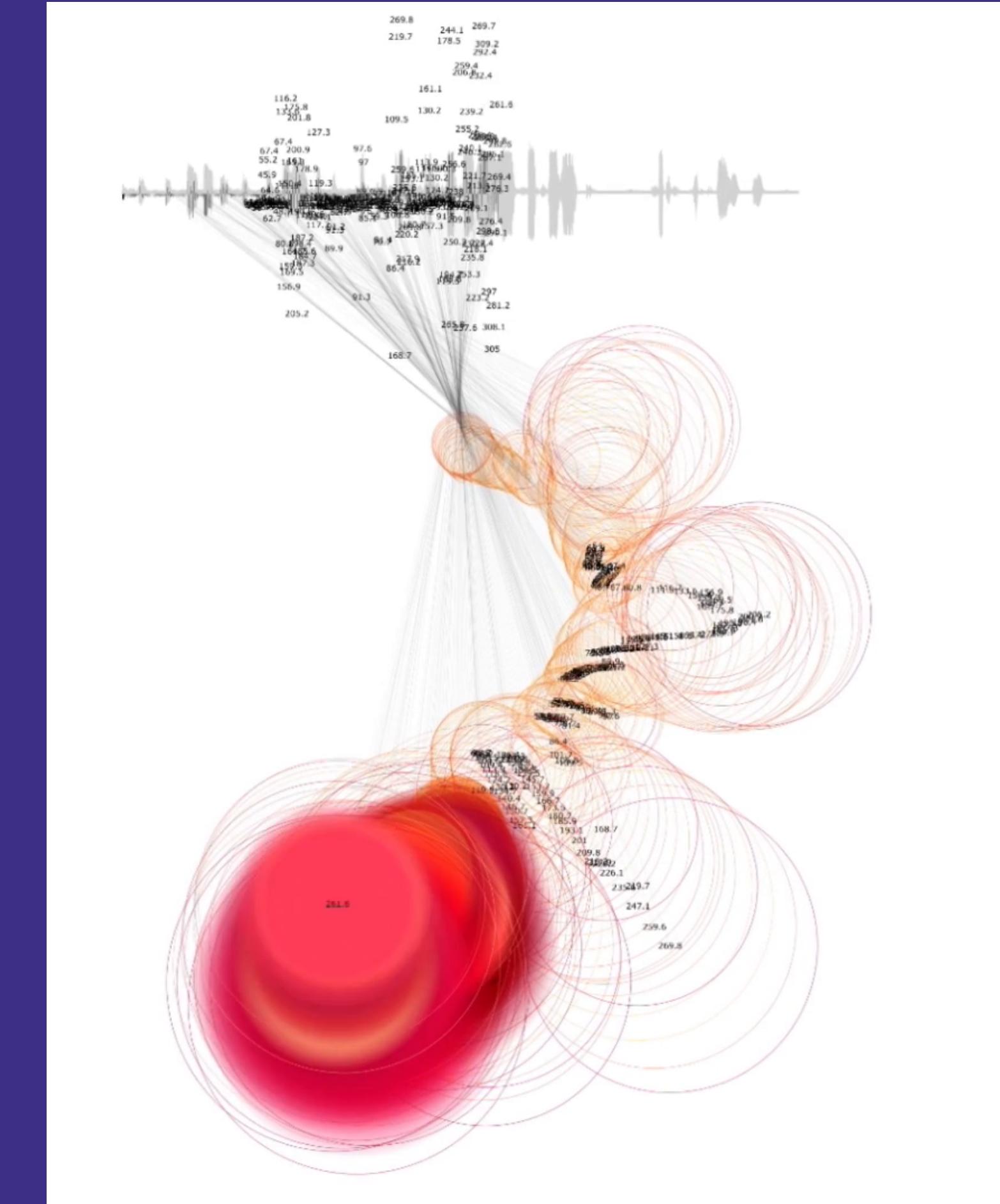


draw with sound

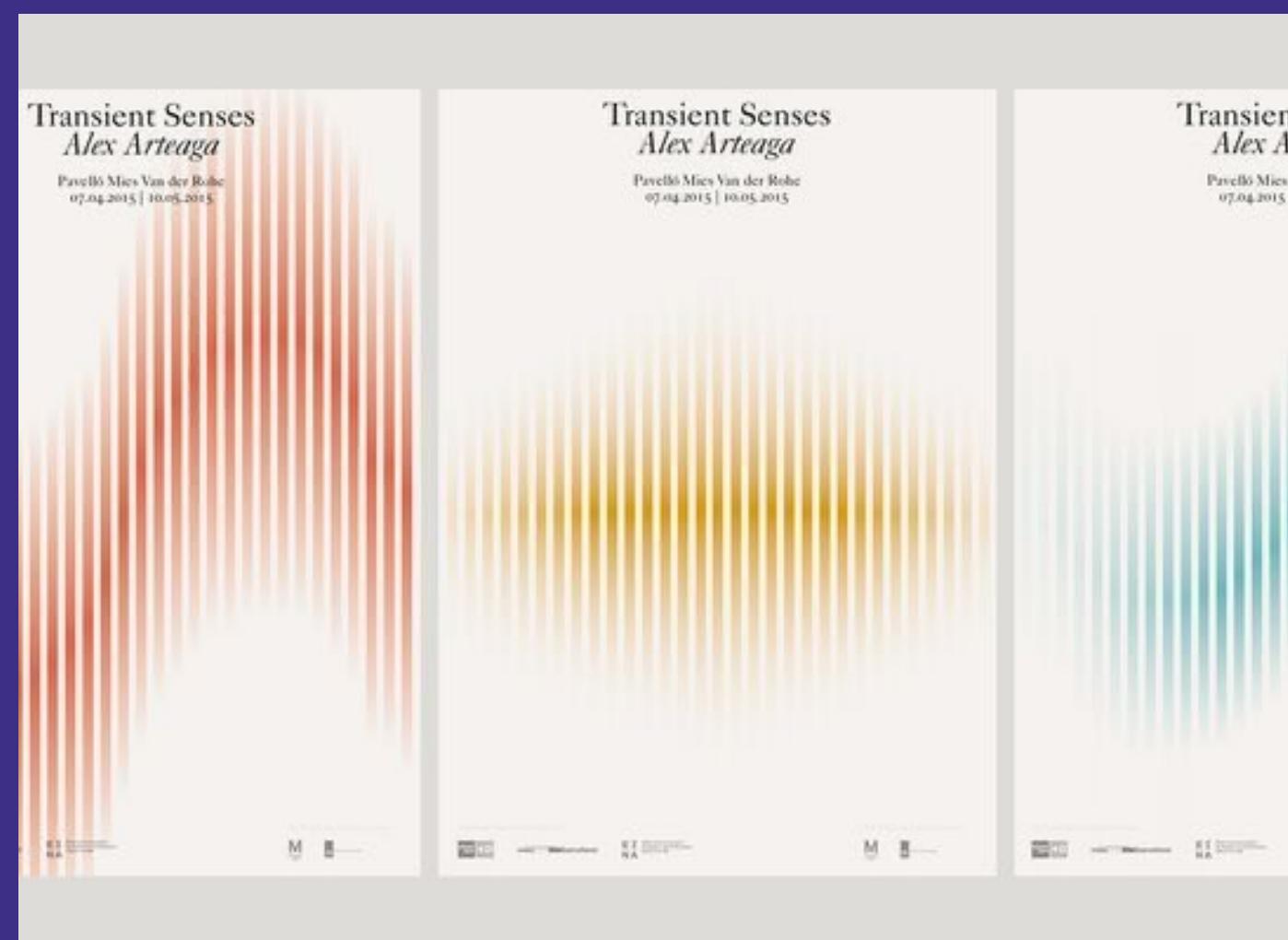
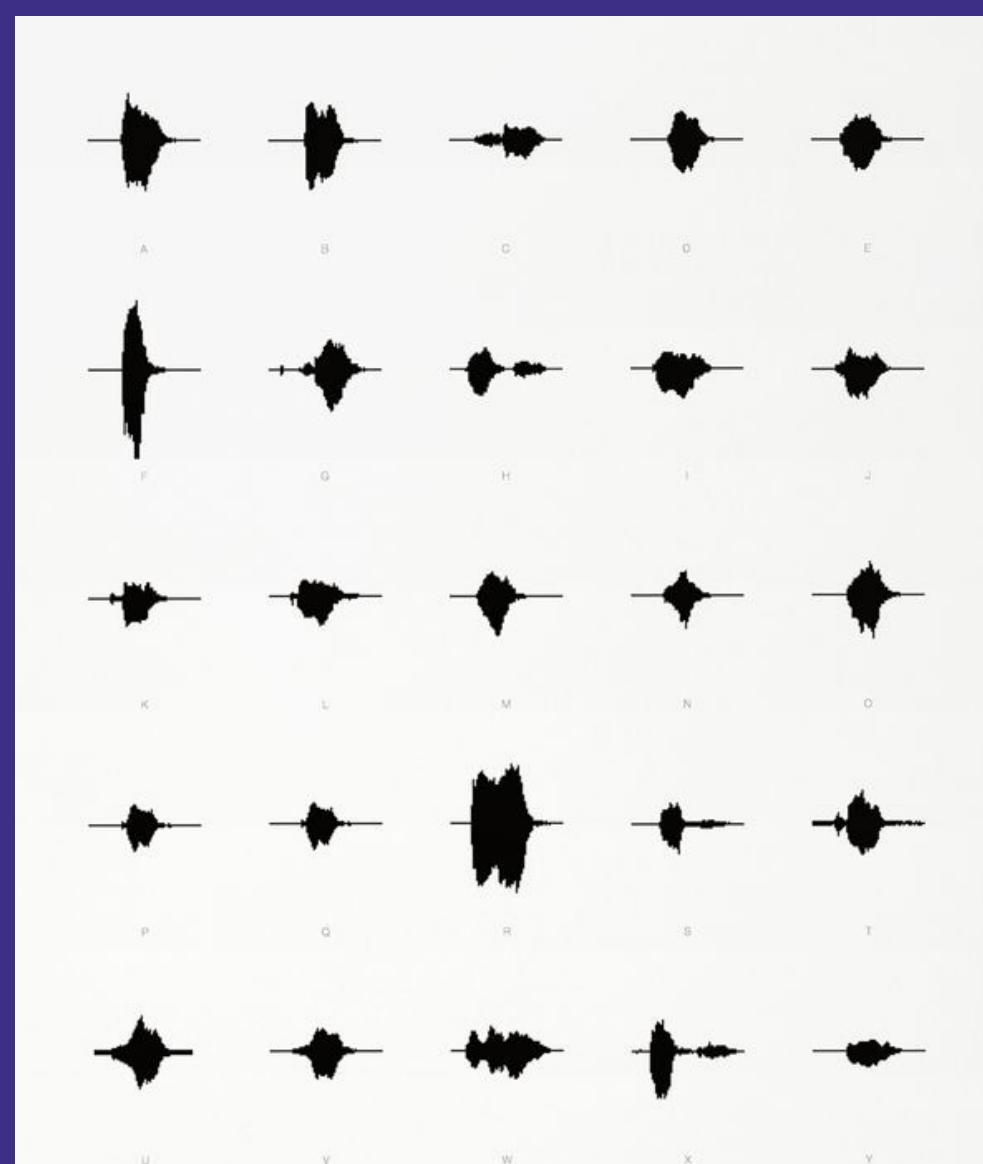
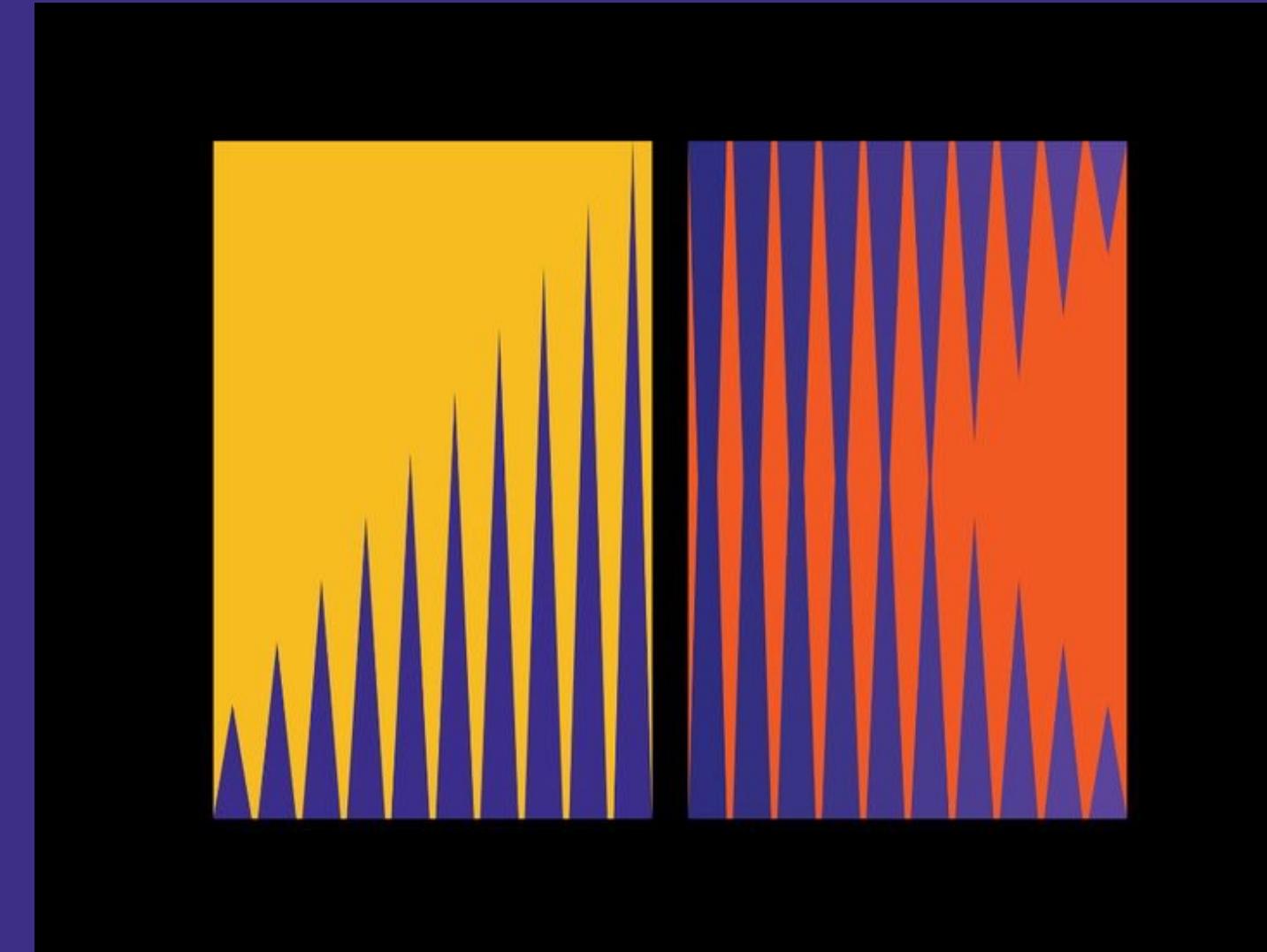
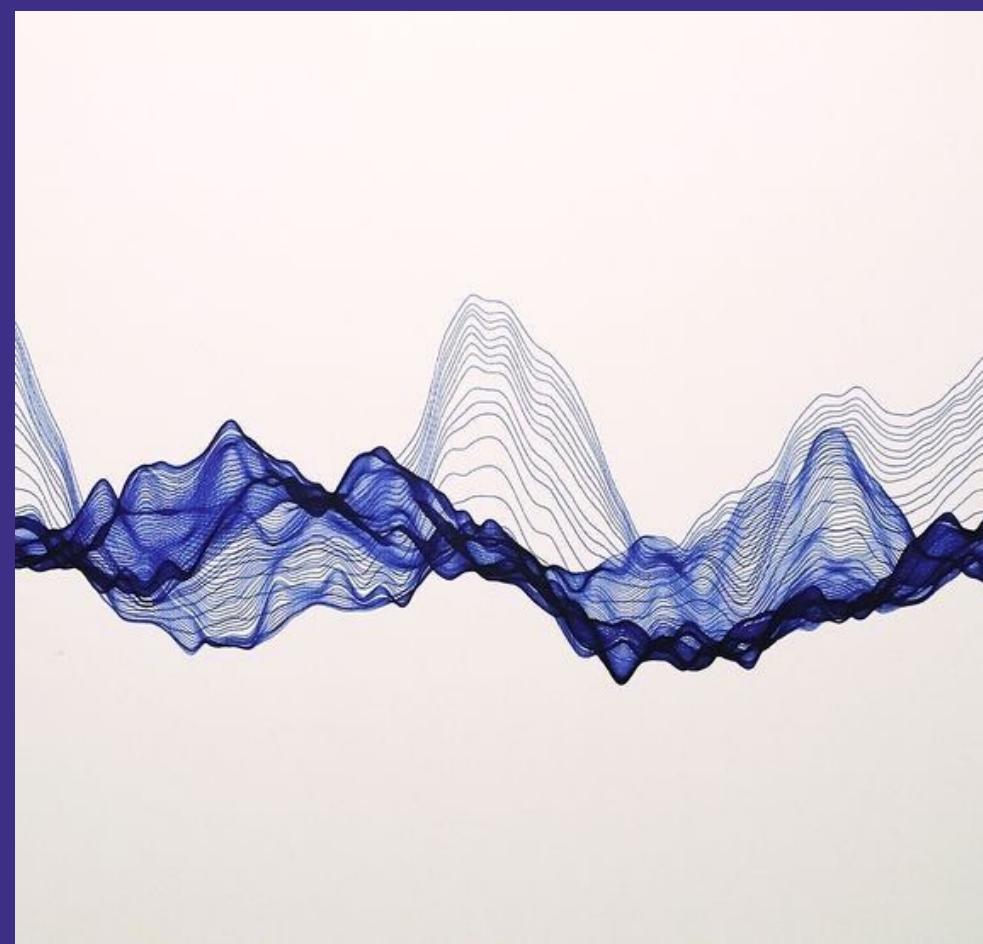


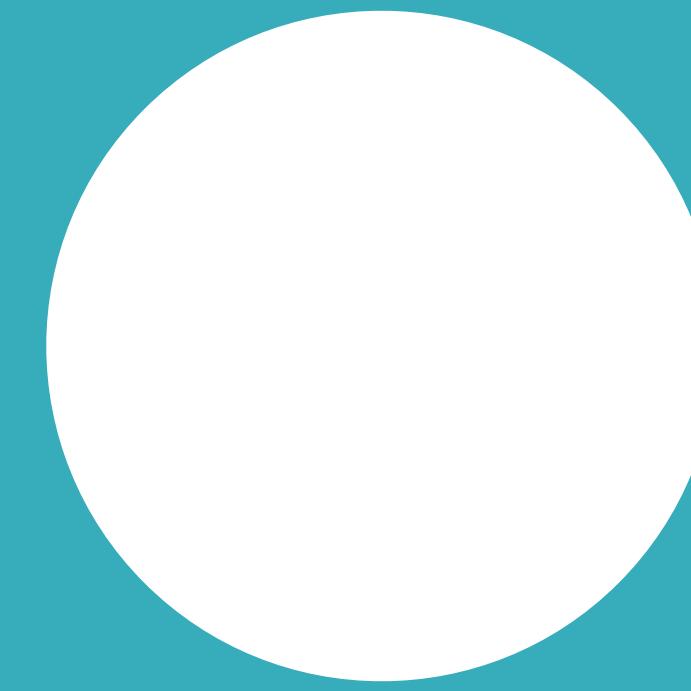
draw over time

inspiration: orgasm library



think in a series





visualizing .csv tables

visualizing .csv tables



we can read the values of columns, rows and cells
`getLevel()`



we can use these numbers and texts to draw things

```
table.getColumn("city")  
table.getRow("inhabitants")  
table.getString(city, inhabitants)
```

	id	name	inhabitants	color
0	Berlin	3.4	#3553bc	
1	Prague	1.3	#f4bc41	
2	Barcelona	1.6	#3a3080	
3	Paris	2.1	#b8bd46	
4	London	8.8	#be9ab9	



resources

The screenshot shows the p5.js website with the 'Table' example selected. The page header includes 'p5.js', 'English', 'Accessibility', and a search bar. The main content area displays a table with city names and populations, followed by a visualization of bubbles where each bubble's size and color correspond to the population value from the CSV file.

<https://p5js.org/examples/loading-and-saving-data-table/>

<https://p5js.org/reference/p5-loadTable/>

2) working with the .csv file

load the csv table

- we need a table in `.csv` format
- we can load it from a folder
 - `table = loadTable('/assets/mammals.csv', 'csv', 'header');`
- or from a URL
- works well for files up to 64MB

csv header

- if we use the option `'header'`, we can include the `.csv` header
- in the example our head would be `id,species,name`

counting

- we can count columns and rows
 - `table.getRowCount()`
 - `table.getColumnCount()`

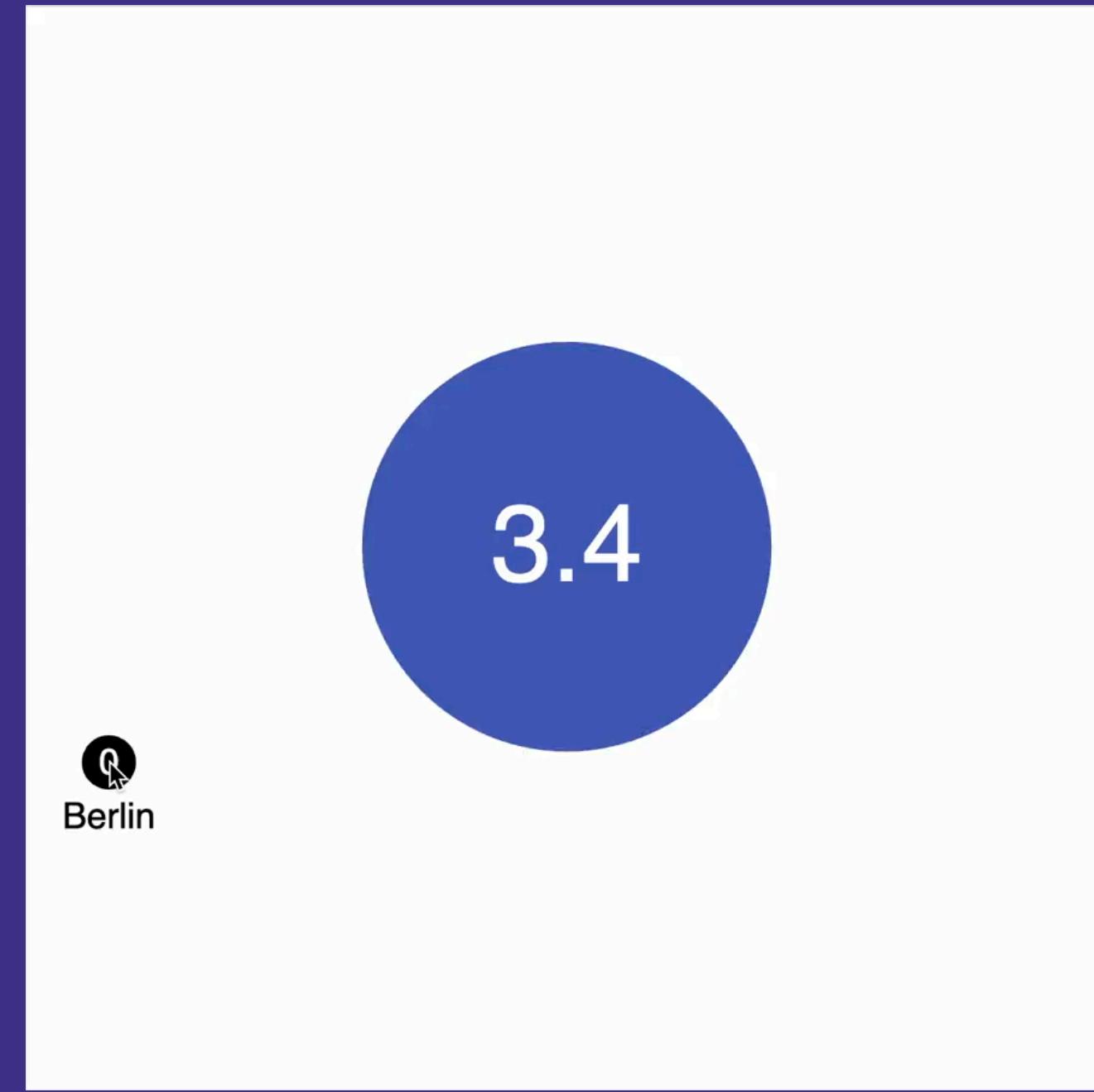
referring to specific cells

- we can get a specific cell by stating its column and row
 - e.g.: column: 0, row: name
 - `table.getString(0, "name")`

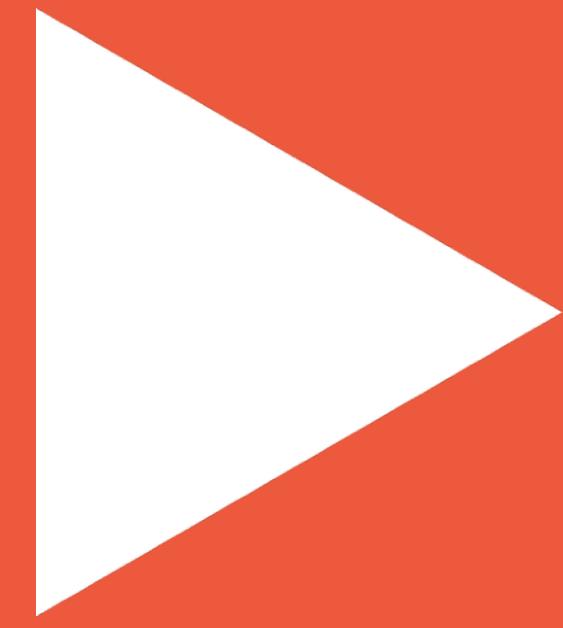
code examples



use inhabitants value
as ellipse size

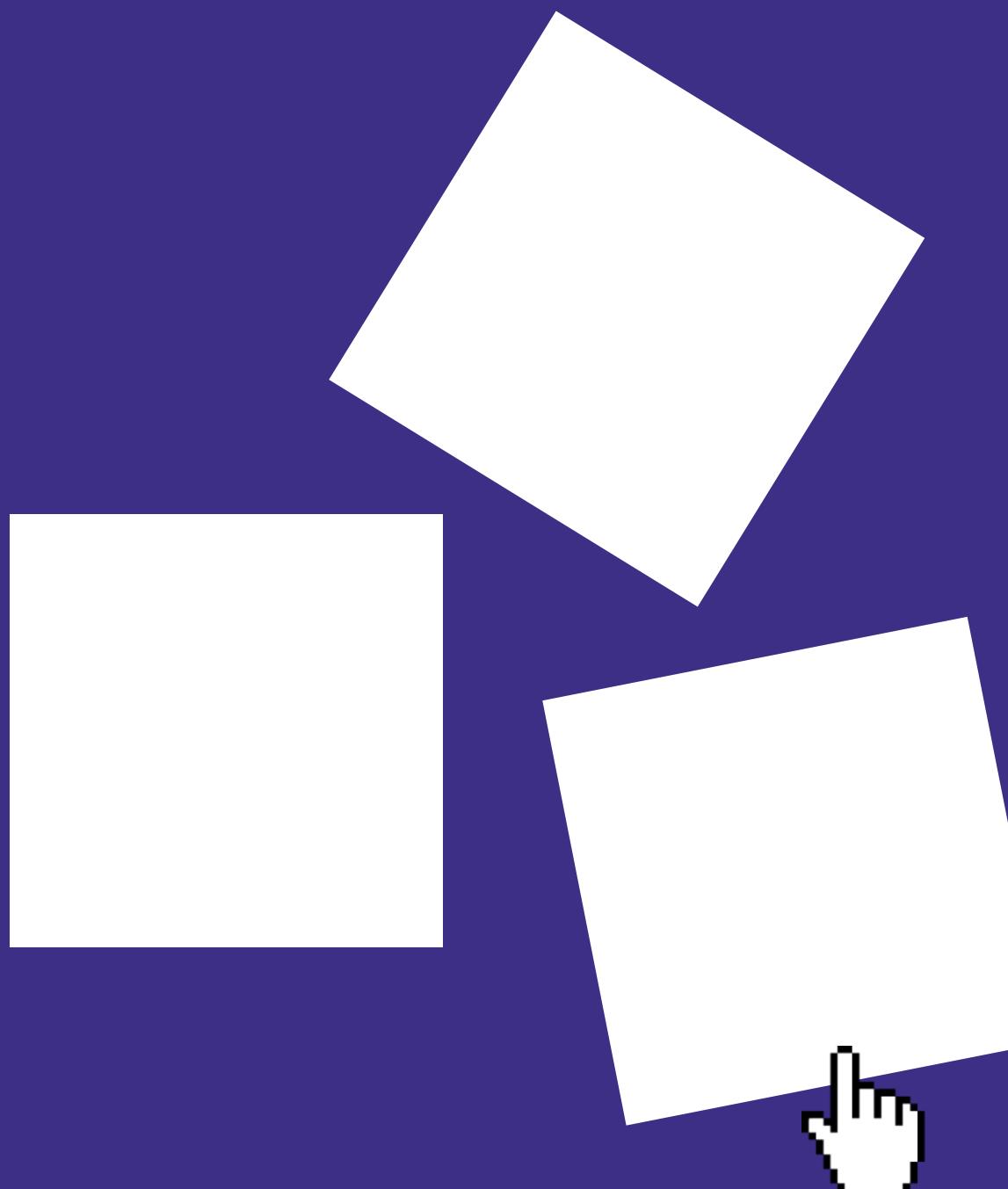


use mouse position
to select a city



let's get
physical

physics



we work with the
matter.js library

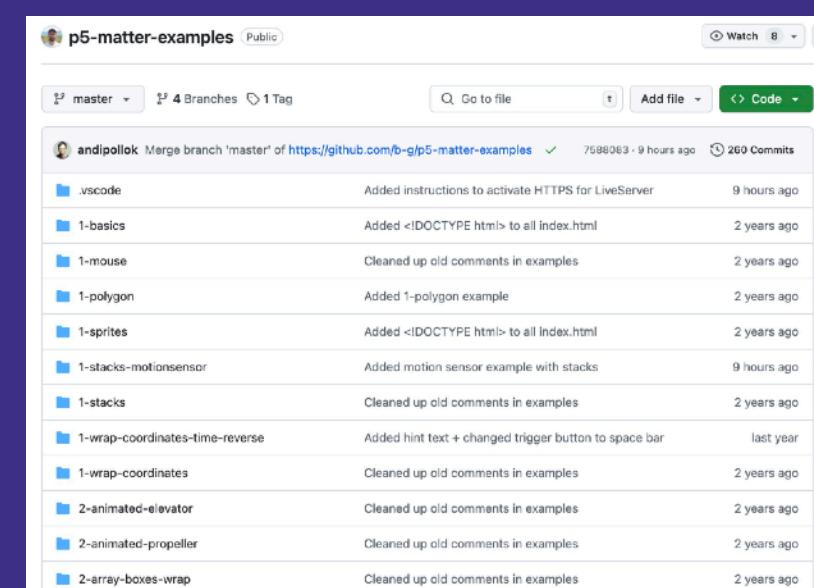
<https://brm.io/matter-js/demo/#mixed>



think interactive
we can draw bouncy objects
that react to each other



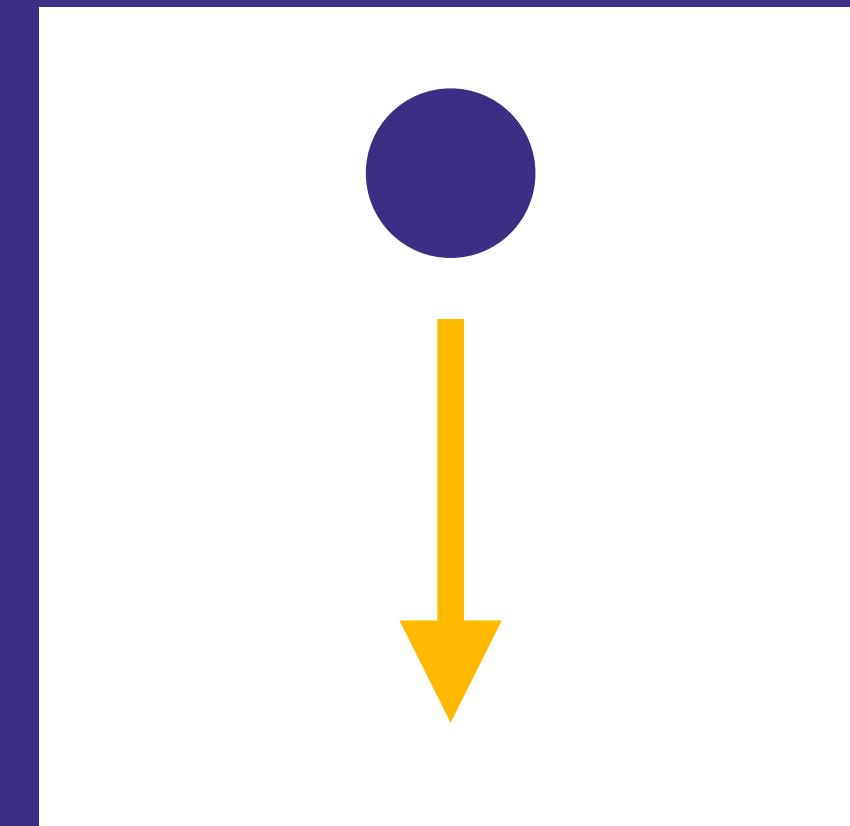
resources



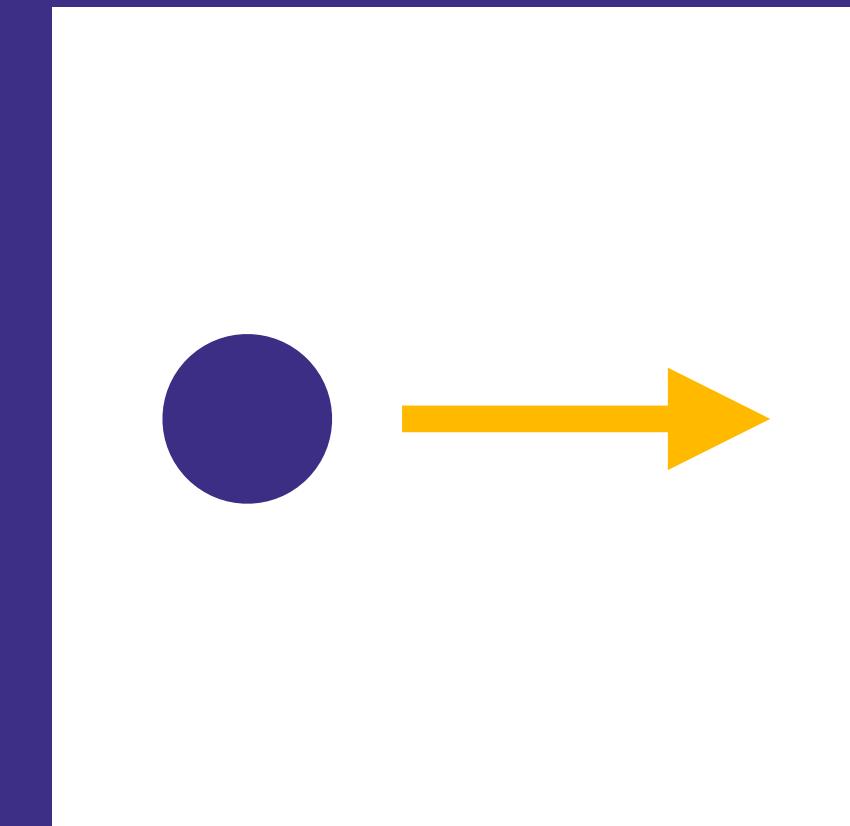
lots of ready-to-use examples:
<https://github.com/b-g/p5-matter-examples>

https://www.youtube.com/watch?app=desktop&v=urR596FsU68&t=0s&b_channel=TheCodingTrain

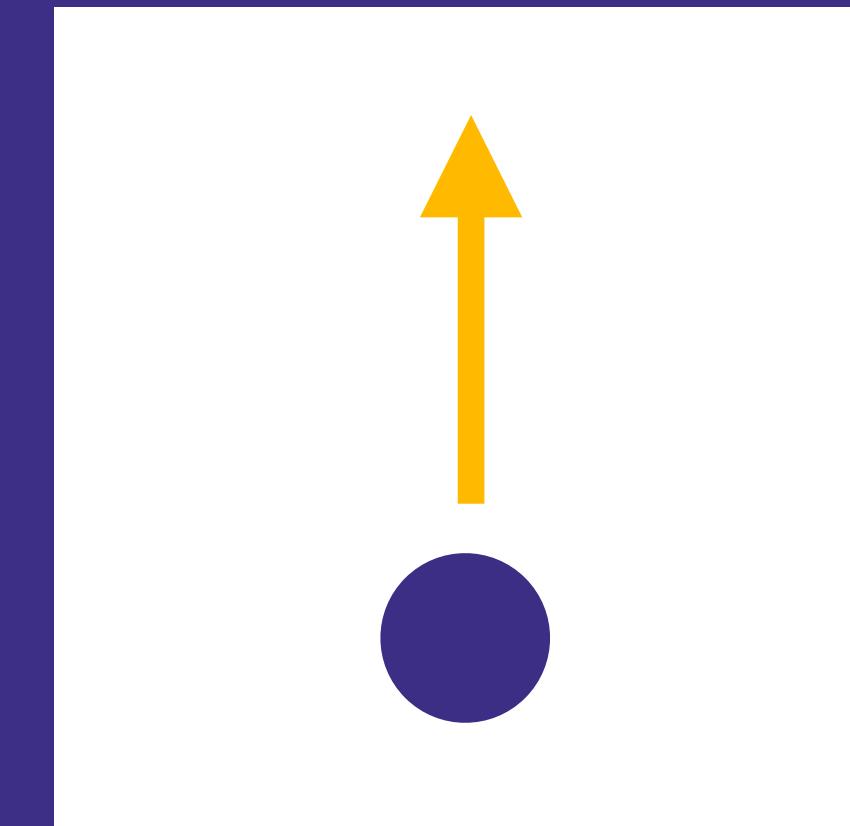
gravity



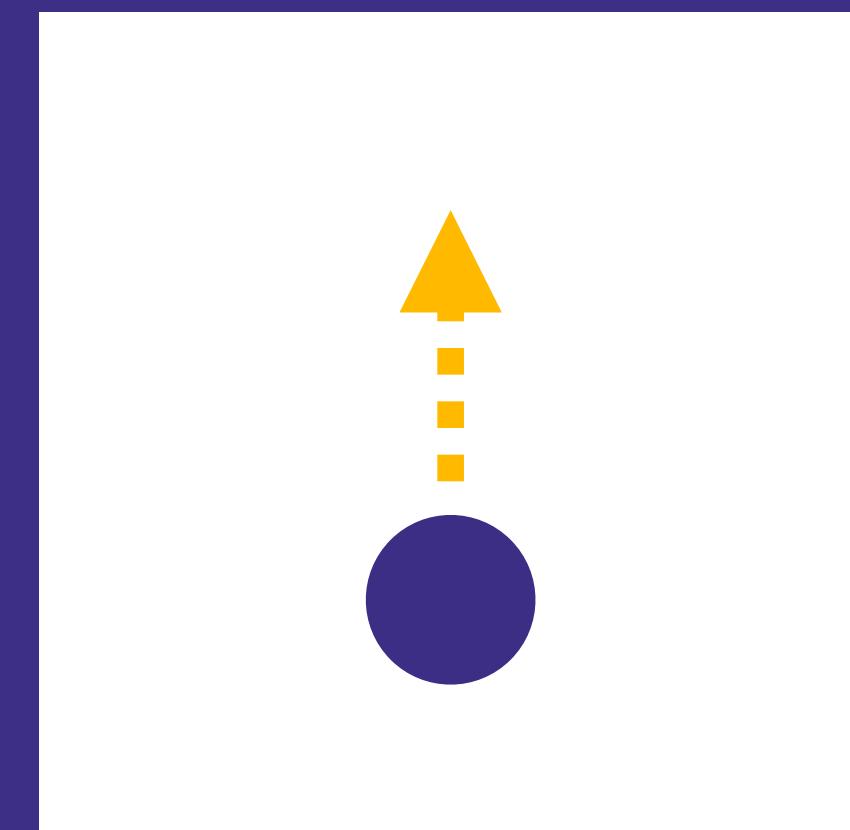
```
// default gravity  
engine.gravity.x = 0;  
engine.gravity.y = 1;
```



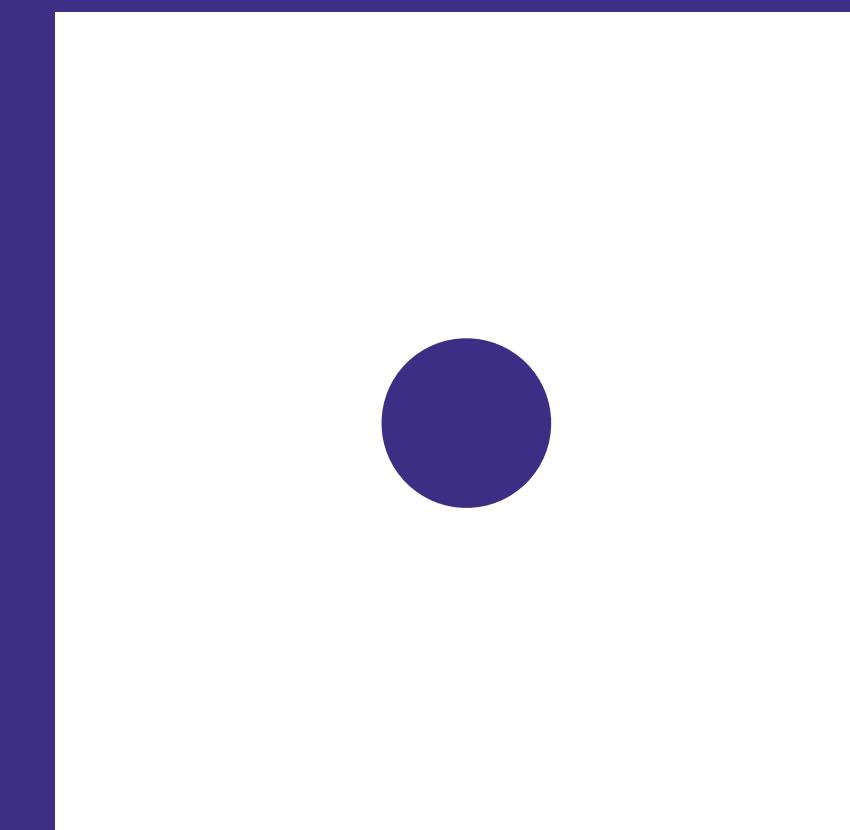
```
// horizontal gravity  
engine.gravity.x = 1;  
engine.gravity.y = 0;
```



```
// reversed gravity  
engine.gravity.x = 0;  
engine.gravity.y = -1;
```

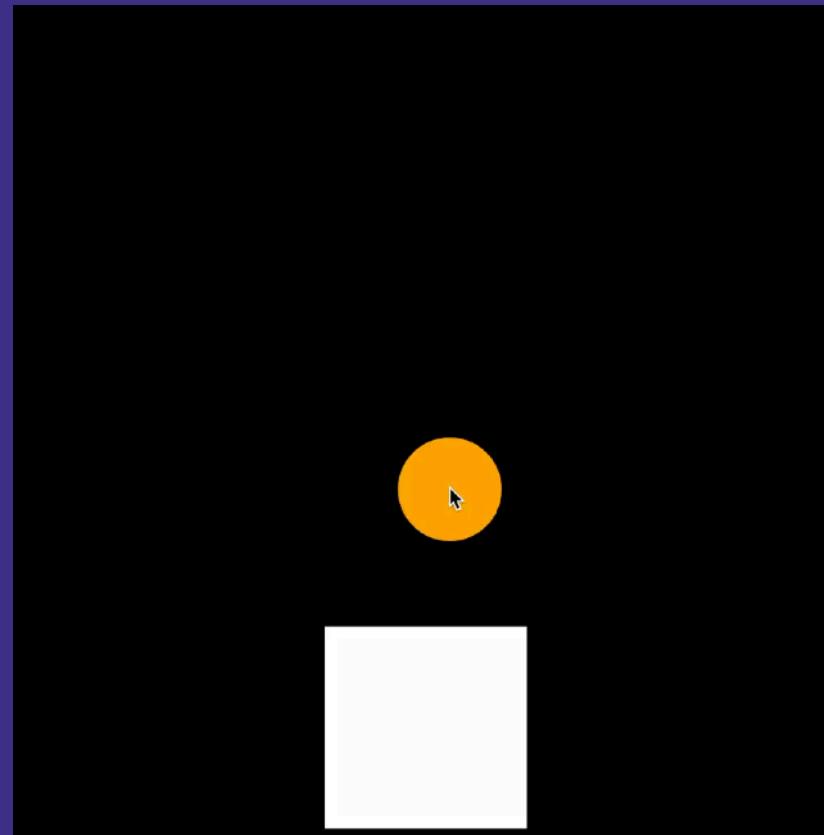


```
// reduced gravity (to top)  
engine.gravity.x = 0;  
engine.gravity.y = -0.1;
```

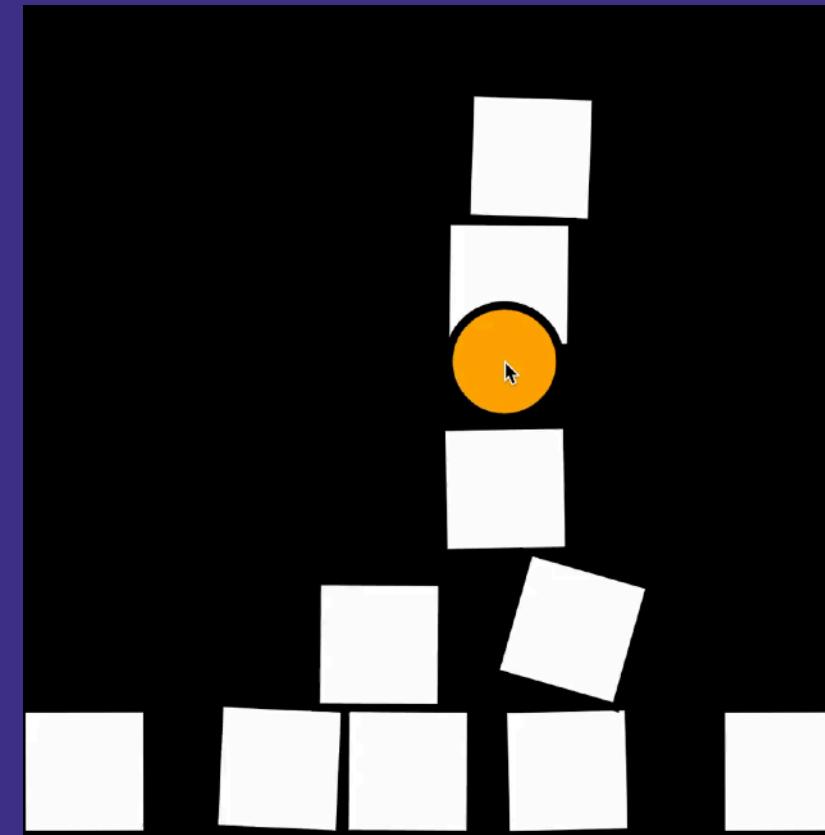


```
// no gravity  
engine.gravity.x = 0;  
engine.gravity.y = 0;
```

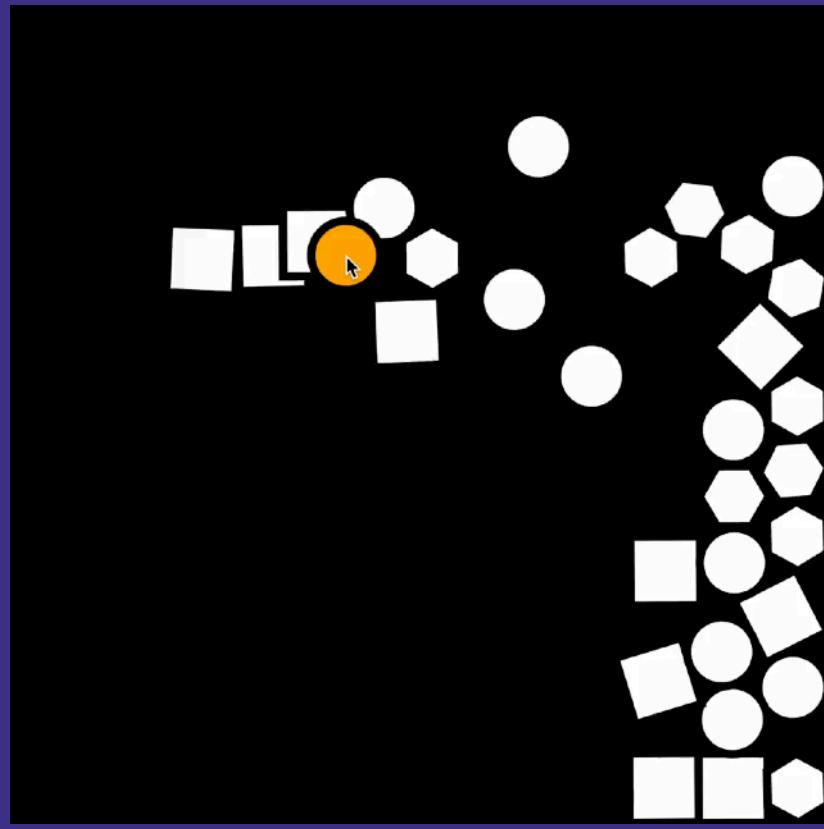
code examples



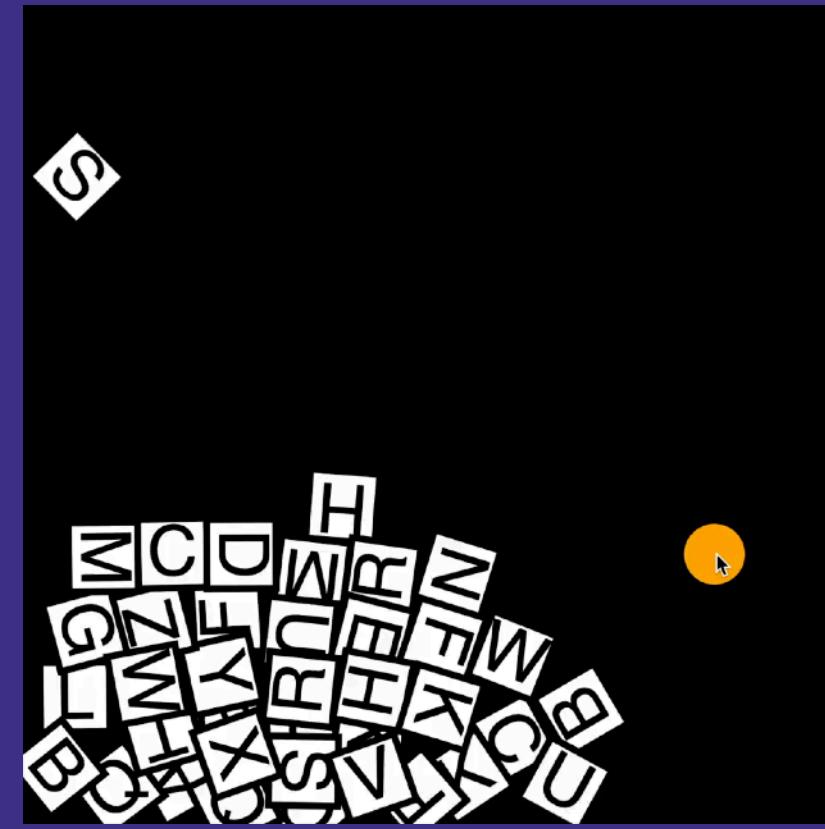
a box that we can push around



add new boxes on click



more elements, gravity



attraction

inspiration: think interactive

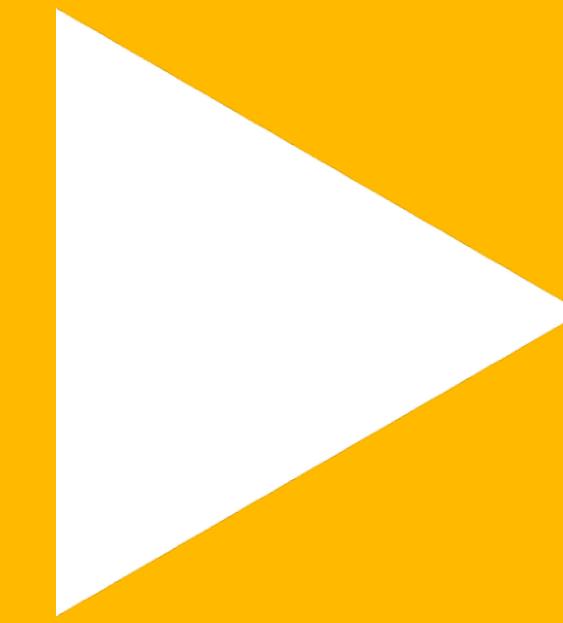
**Master's degree
program**

**Apply by
15th May**



**Academy of Arts, Architecture
and Design in Prague, UMPRUM**

umprum.cz/en

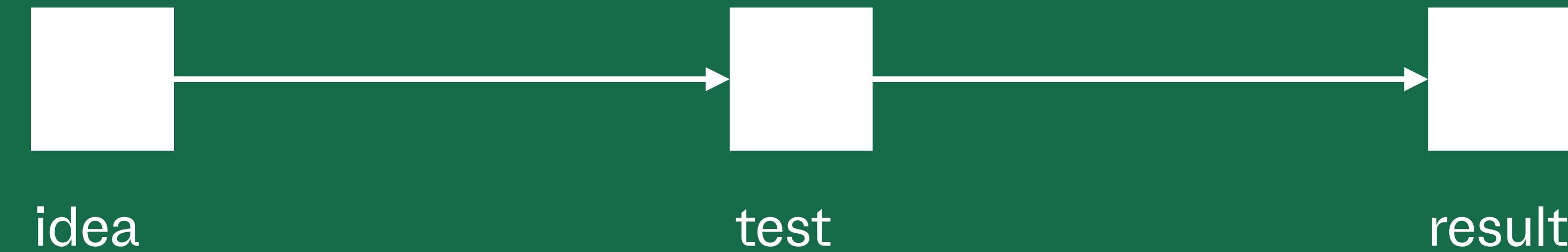


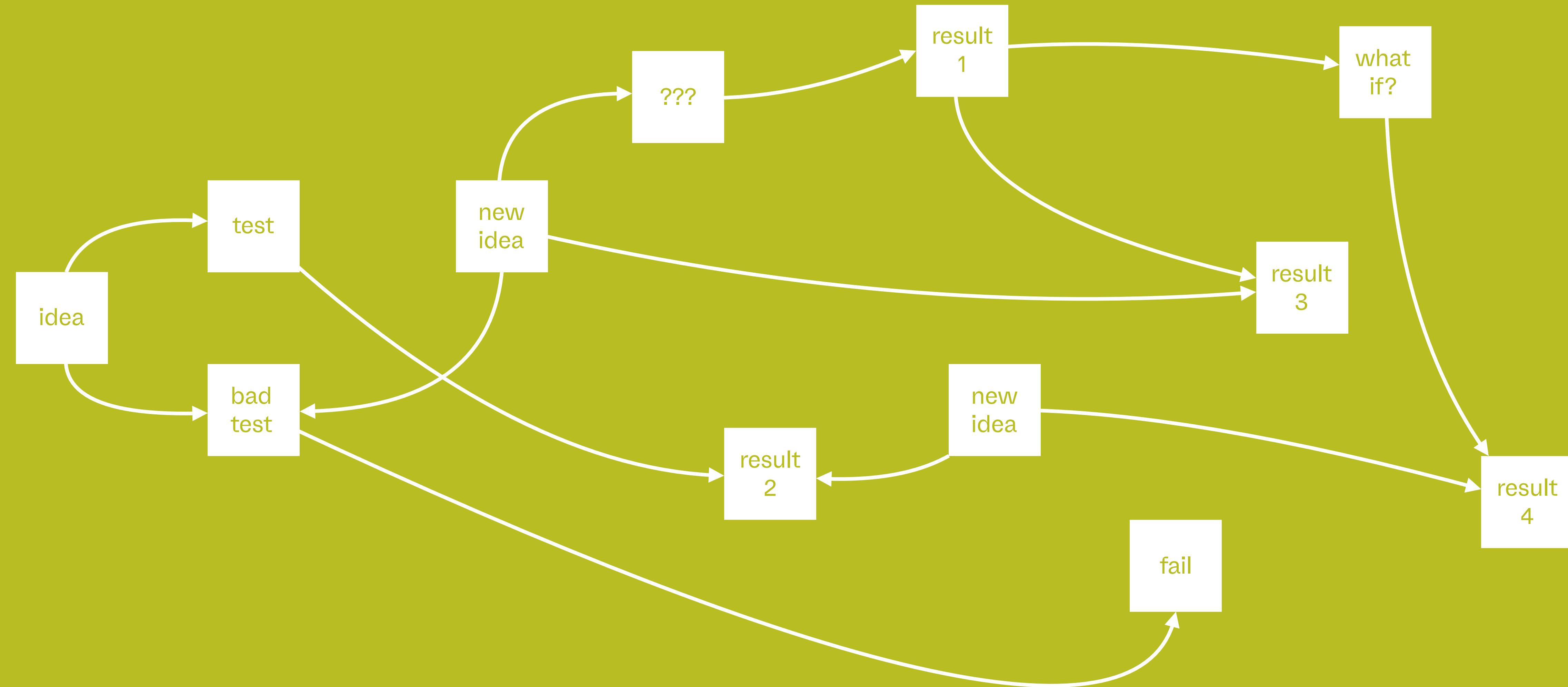
the iterative
process

iterate, combine,
document

- iterate, re-iterate, re-iterate
- work in baby steps
- document everything!
- watch out for
happy accidents
- build an archive
- let the process
guide the results
- open end

expectation

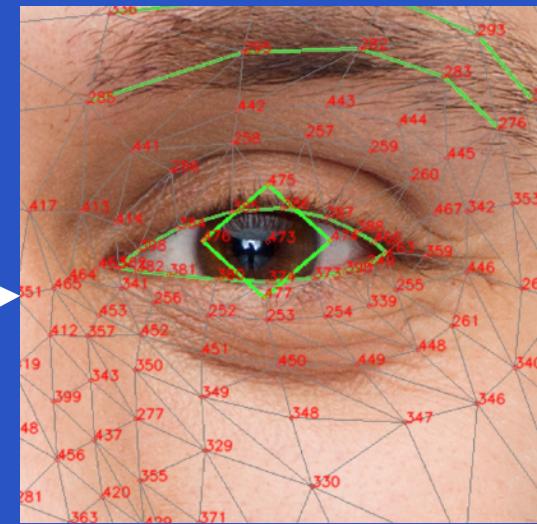




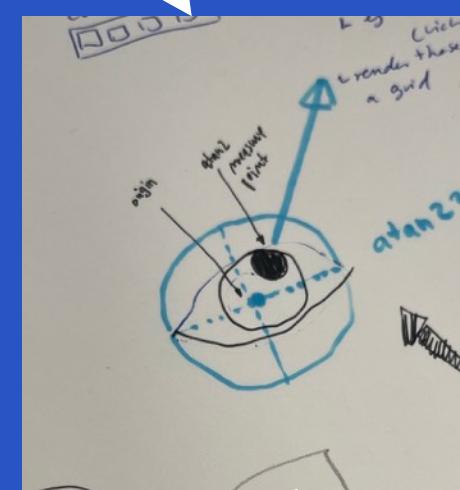
reality: the iterative process



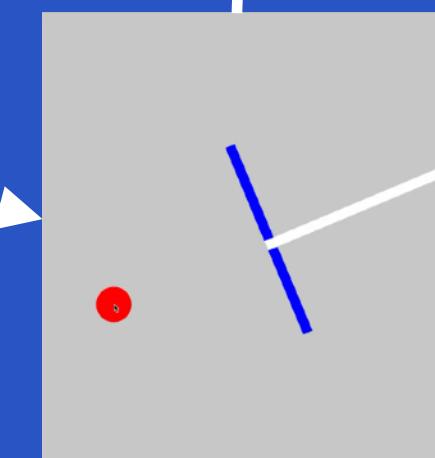
vague ideas



tracking points



atan2?



atan2 test

68_Eyeballs

Anderes

- atan-test
- eyeballs-1
- eyeballs-2
- eyeballs-3-nose-follow
- eyeballs-4-eye-follow
- eyeballs-5-eye-follow
- eyeballs-6-interface
- eyeballs-7-atan
- eyeballs-8-arrow
- eyeballs-9-arrows
- eyeballs-10-arrow-loop
- eyeballs-11-ease
- one-euro-filter-1
- one-euro-filter-2
- smoothing-atan-1

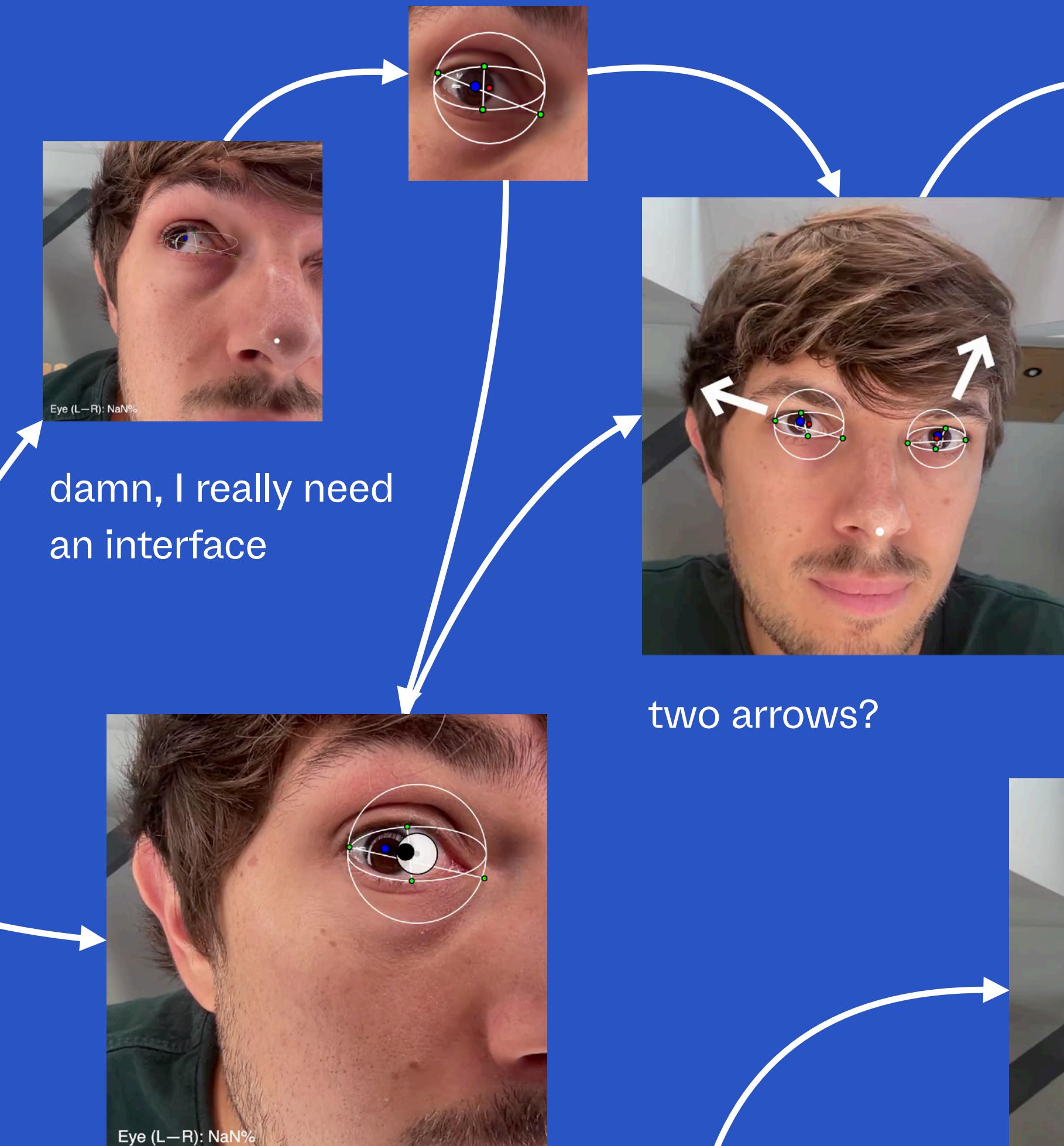
Vorschau

- Bildschirmfoto...um 10.09.06
- Bildschirmfo...um 10.11.03
- F6F326E9-3...F02FC91.jpg

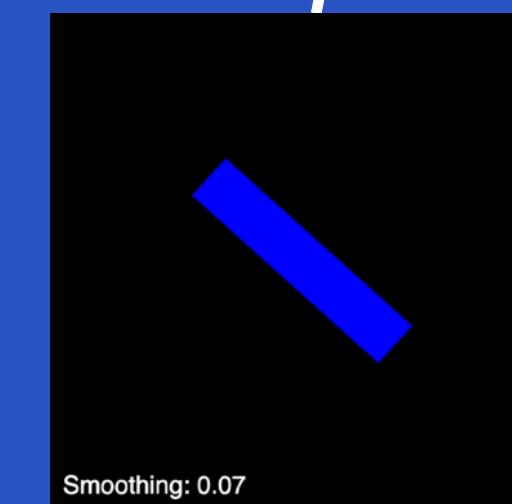
damn, I really need
an interface



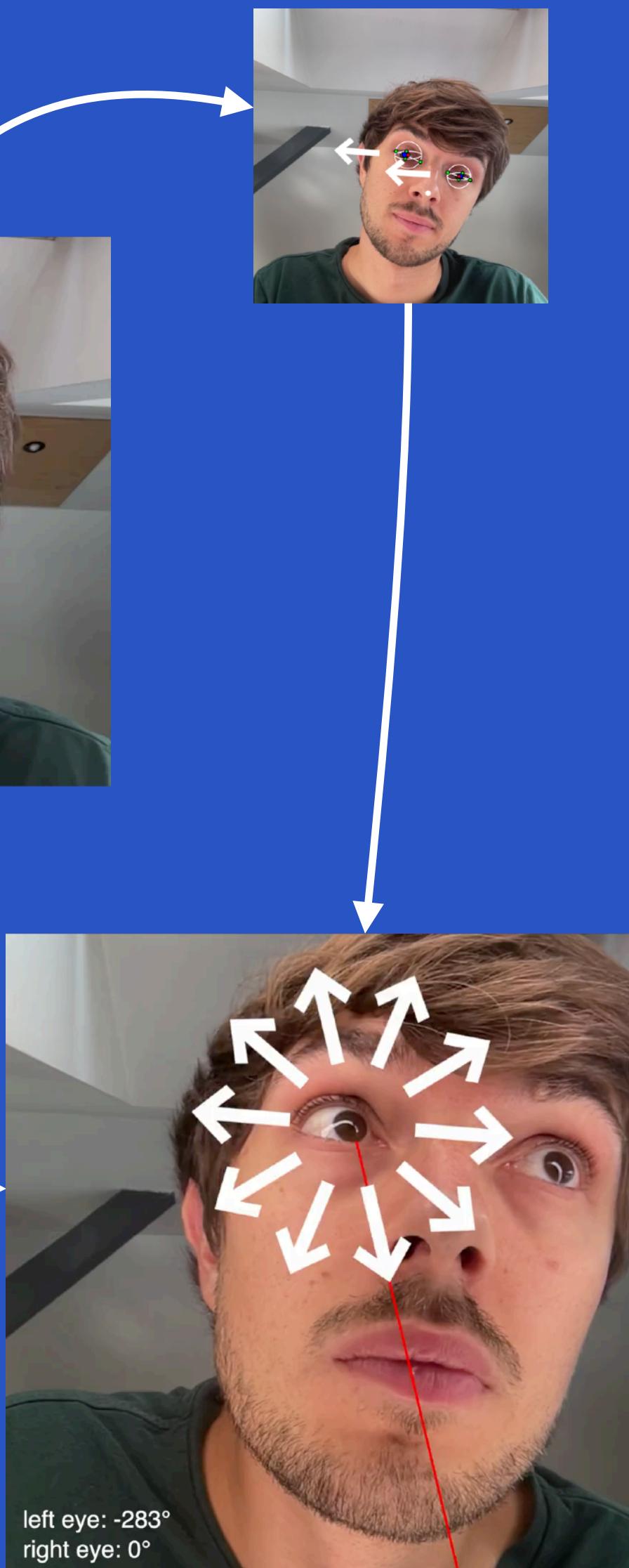
atan eyes?



goggly eye?



add smoothing!



mooooore arrows!

Smoothing: 0.07

Thank you:-)



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GitHub/nahuelGerthVK

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www.nahuelgerth.de