VARIABLE FONTS & READABILITY: THE RISE OF CUSTOM READING EXPERIENCES

CSS Conf · Budapest, Hungary · September 24, 2019

Families. Drunks, Comple[x]
[per]haps. Everyone. Free beer
safe as houses.
I've got Saturday off.

over to my place. I offer hi[m]
[thr]ough it, he stops and I

have to tell yo[u]

of God
them eve[ry]
by the won[d]
know you."

nes —but nobod[y]

was a saint and n[o]
man.

---

around town. First up, I see Sophie, very briefly. I ask if she can make it on Sunday, to which she says, "Sure, Ed."

"Bring the family," I suggest.

"I will."

Then I go to Milla's and ask if she'd allow me to escort her to church on Sunday.

"I'd be absolutely delighted, Jimmy." In short, she's thrilled.

Then.

The last visit.

As I find myself knocking on Tony O'Reilly's front door, I don't feel too optimistic.

"..., " he says, "you." But he appears happy enough to see me.

[g]ive that brother of mine my message?"

[I] did," I say. "My name's Ed, by the way."

I'm a touch embarrassed now. I hate telling people what to do, or even asking. Still, I look now at Tony O'Reilly and talk. "I was kind of . . ." The rest of the sentence breaks off.

"What?"

I pick it back up but keep it. I use something else instead.

"I think you know what, Tony."

"Yes," he agrees. "I do. I've seen the spray paint."

I look down and back up. "So how about it?"

He opens the flyscreen, and I'm worried he might be coming out to abuse me, but he asks me to come in and we sit down in his lounge room. He wears a similar outfit to last time. Shorts, a tank top, and slippers. He doesn't look too mean, but I'm a firm believer in men in that sort of gear. All the best criminals wear stubbies, tank tops, and flip-flops.

Without asking, he brings out a cool drink. "Orange cordial okay?"

157

in the way he moved. The courtesy he showed towards Miss Montag made a striking contrast with the way she had been treated by K. Nonetheless, Miss Montag did not seem to be cross with K. as it even seemed to him that she wanted to introduce the captain. K. however, did not want to be introduced, he would not have been able to show any sort of friendliness either to Miss Montag or to the captain, the kiss on the hand had, for K., bound them into a group which would keep him at a distance from Miss Bürstner whilst at the same time seeming to be totally harmless and unselfish. K. thought, however, that he saw more than that, he thought he also saw that Miss Montag had chosen a means of doing it that was good, but two-edged. She exaggerated the importance of the relationship between K. and Miss Bürstner, and above all she exaggerated the importance of asking to speak with her and she tried at the same time to make out that K. was exaggerating everything. She would be

35%

Hi! 👋
I'm Damien.

Hi! 👋

I'm **Damien**.

I am a queer **designer who codes**,
specialised in **design systems** and **accessibility.**

I work for **Castor** in Amsterdam
as a **Design Systems & Accessibility Lead**.

I use **they/them** pronouns.

My Twitter handle is **@iamhiwelo**
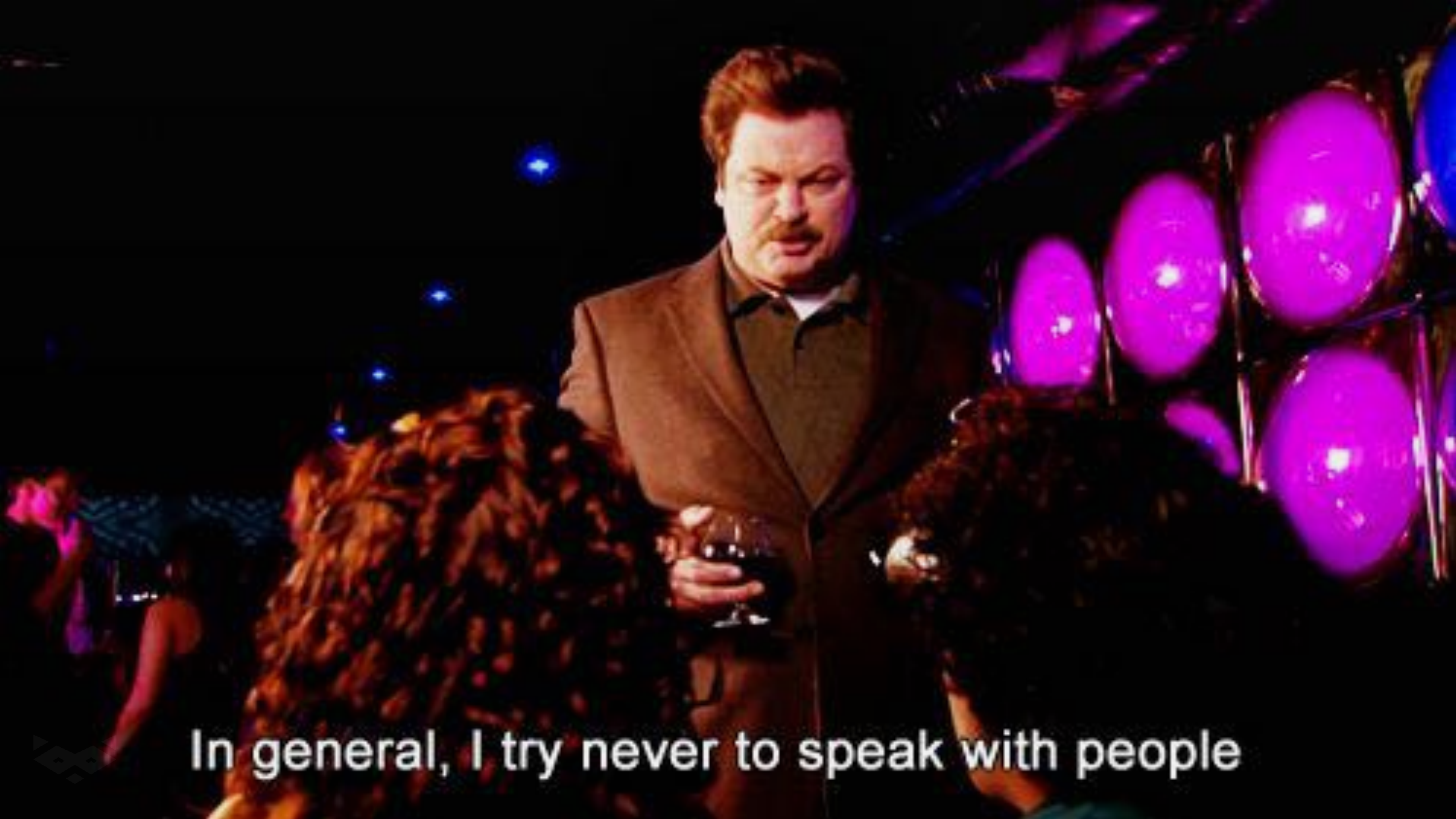
In general, I try never to speak with people

Content warnings ⚠️

I am known to use a colourful language, so please pardon my French! 🤭

There is few videos, including sound. 🔊

Usually, my sense of time is pretty bad. ⏳

And also, raccoons & Jake Peralta 🦝

Buckle up!
Let's talk about readability.

But first,
why?

I have a permit

Reading is a complex cognitive process.

Literacy is an **acquired skill** requiring an **important learning curve**.

Literacy is **not always a life-long skill**.
You can acquire reading difficulties.

The thing is... the Web is mainly **text-based.**
And a text is **not accessible per se.**

Readability is now
an accessibility success criterion.

WCAG Success Criterion **1.4.12 Text Spacing** (Level AA):

In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all of the following and by changing no other style property:

- ▹ **Line height** (line spacing) to at least 1.5 times the font size;

- ▹ **Spacing following paragraphs** to at least 2 times the font size;

- ▹ **Letter spacing** (tracking) to at least 0.12 times the font size;

- ▹ **Word spacing** to at least 0.16 times the font size.

To understand readability, you need to know **dyslexia**.

Studies show that improving readability for dyslexic users improve the experience for all.

Ten guidelines for improving accessibility for people with dyslexia.
V. Zarach – CETIS University of Wales Bangor, 2012

± 10% of the global population is having a degree of dyslexia.

Not always since childhood:
it can appear after brain injuries, strokes
or just with new languages you are learning.

Also, dyslexia is **not only about reading**.

How do we read?

Reading is about sounds. 🎵
Reading is about rhythm. 🎶
Reading is about music. 🎼

Reading is mainly a phonological process, heavily influenced by the environment.

Reading is not linear,
we are reading by *saccades*.

And between each saccades,
we have something called *fixation*.

During a fixation, everything except the focus is blurry.

Reading is less about words than it is about staring at screens.

Reading is not so much about words...
it is more about identifying shapes.

Web Content Accessibility Guidelines (WCAG) is developed through the W3C process in cooperation with individuals and organizations around the world, with a goal of providing a single shared standard for web content accessibility that meets the needs of individuals, organizations, and governments internationally.

Taht's wyh yuo cna porbalby raed tihs esaliy desptie teh msispeillgns.

That's why you can probably read this easily despite the misspellings.

And shapes are also mostly created by letters' *identifying features*

Readability

READABILITY

problem

porbelm

pbleorm

I know, brain hurts. 🧠   But bear with me, we're done with the lecture.

So, what's the point?

Let's take a look to something **designed for readability**.

A series of weight variations for a good visual hierarchy

credits: Mijksenaar

A tracking depending of the context

Gate C5

A system as consistent as possible

credits: Mijksenaar

This is readable, and efficient. Great. But can we do better?

credits: Mijksenaar

Yes, we can.

Variable fonts will help you do the extra mile.

Accessibility is hard.

It is hard because
there is **no one-fits-all** solution.

Creating accessible and inclusive experiences is about **collaboration** and **customisation**.

Variable fonts can help **create collaboration** between designers and engineers.

Variable fonts can also help users to customise their experience.

We have **different capabilities**,
we are used to **different media** and platforms,
we are **not reading the same way**.

Sorry Medium…
there is **no standardise "readable" experience.**

AMP Medium | Flipboard Feedly Pocket Kindle | RSS feed ATs

AMP   Medium   Flipboard   Feedly   Pocket   Kindle   RSS feed   ATs

Variable fonts will bring you here
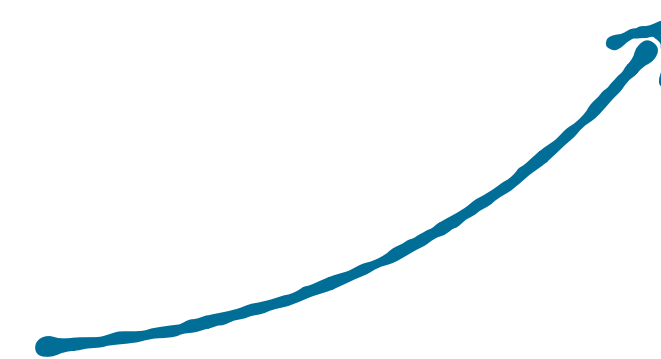
It can be a bit like the font-size toggle, but it **can't rely on the browser**.

But Damien… how do we implement such a thing? Should we give a complete freedom to our users?

Question from a mysterious silent member from the audience

Hell no!

But first, let's have a small break!

What is **the variable part** of a variable font?

There is **4 registered axes**.

1.

The **weight.**

Weight

```
.selector {
  font-variation-settings: 'wght' $value;
}
```

2.

The width.

Width

```
.selector {
  font-variation-settings: 'wdth' $value;
}
```

3.

Roman vs italic.

(but please don't 🤷🏻‍♀️)

Italic

```
.selector {
  font-variation-settings: 'ital' 1 | 0;
}
```

4.

The slant.

(please stay also away from this one)

Slant

```
.selector {
  font-variation-settings: 'slnt' $value;
}
```

Of course,
there is a **bonus** one!

Optical size is an **old design concept** finally available for our Web experiences.

This option can definitely be a game changer. It can be use as a variety of presets.

Optical Size

```css
.selector {
  font-optical-sizing: auto;
  /* or */
  font-variation-settings: 'opsz' $usuallyFontSizeValue;
}
```

Usually, each preset is one of
the text variations defined in design systems, like:
body, small text, caption, subhead, display variations

COLORS

TYPOGRAPHY

Type scale

Additional emphasis

Display styles

Emphasis styles

Font stack

Resources

ILLUSTRATIONS

SOUNDS

ICONS

INTERACTION STATES

SPACING

DATA VISUALIZATIONS

12am   8am   12pm   8pm   12am

Emphasis styles

To communicate content hierarchy, use the core typographic scale first. Once the main hierarchy is established, if two pieces of text of the same style have different positions in the content hierarchy, the Subdued style may be used to de-emphasize one of them. Subdued content isn't unimportant or superfluous, but rather makes room for the eye to orient itself and focus on core content.

✓ Do

Use subdued with any text style.

DisplayXLarge   **Subdued**

DisplayLarge   **Subdued**

DisplayRegular   Subdued

Heading   Subdued

✓ Do

Use subdued with any text style.

DisplaySmall   Subdued

Body   Subdued

SUBHEADING   SUBHEADING

Caption   Caption

In general, avoid using the subdued on its own, when not contrasting with other text from the same part of the type scale. However, subdued can be used for standalone content when it represents a non-actionable or otherwise unimportant state, such as when the normal content is absent.

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789 (!@#$%&.,?:;)

Penultimate

The spirit is willing but the flesh is weak

SCHADENFREUDE

3964 Elm Street and 1370 Rt. 21

The left hand does not know what the right hand is doing.

The Latin alphabet, owi to political causes, finall displaced the other nati scripts of Italy. As the al of Rome, it became the a of Latin Christendom, an the literary alphabet of E and America. It is now, w the single exception of t Arabic, the only alphabe possessing any claim to extension. Its great hist

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the grid

a tutorial about to correctly line ur text so that it nes up in Adobe Design. This is a ial about how to

To correctly line up your text so that it all lines up in Adobe InDesign. This is a tutorial about how to correctly line up your text so that it all lines up in Adobe InDesign.

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garden
Micro
garden
Text, horizontally scaled by 120%
garden
Text

32

Vertical proportions
Comparing the analyses of imen pages, it becom approaches to heigh

Robert Mallary, 79, Junk Artist Behind the Growth of Sculpture

By ROBERTA SMITH

Robert Mallary, a junk artist who contributed to the blossoming of American sculpture in the late 1950's and early 60's, and was also a pioneer in the use of plastics and computers in art, died on Monday at Cooley-Dickinson Hospital in Northampton, Mass. He was 69 and lived in Conway, Mass.

The cause was leukemia, said his son, Michael.

brought a fierce new physical reality to art through the use of found objects and unusual materials. In the early 60's, he favored trash — discarded pieces of cardboard, wood, cloth rags and clothing — and occasionally store-bought items like tuxedos. These he assembled, with the help of polyester resin, into rough, paintinglike reliefs and sculptures that veered between the angst of Abstract Expressionism and the in-

A pioneer in the use of plastics and computers who also favored trash.

cent sculptures. He exhibited polyes-

because of liver problems, becoming one of the first artists to write about its hazards. He turned briefly to bronze, but became interested in the computer's potential as an artistic tool. In 1968, he exhibited in London a work that is considered one of the first computer-designed sculptures. Although he continued making assemblages, he then devoted the bulk of his energies to this new medium, writing and lecturing, and creating

And **maybe more**
than just one bonus.

Each font designer
can **define their own custom axes**.

Custom axes are defined with a **4-letters tag**.

For dyslexic users, there is 3 main axes to watch:
ascender or descender length,
bowl size and bowl shape.

For dyslexic users, there is **3 main axes** to watch:
ascender or descender length,
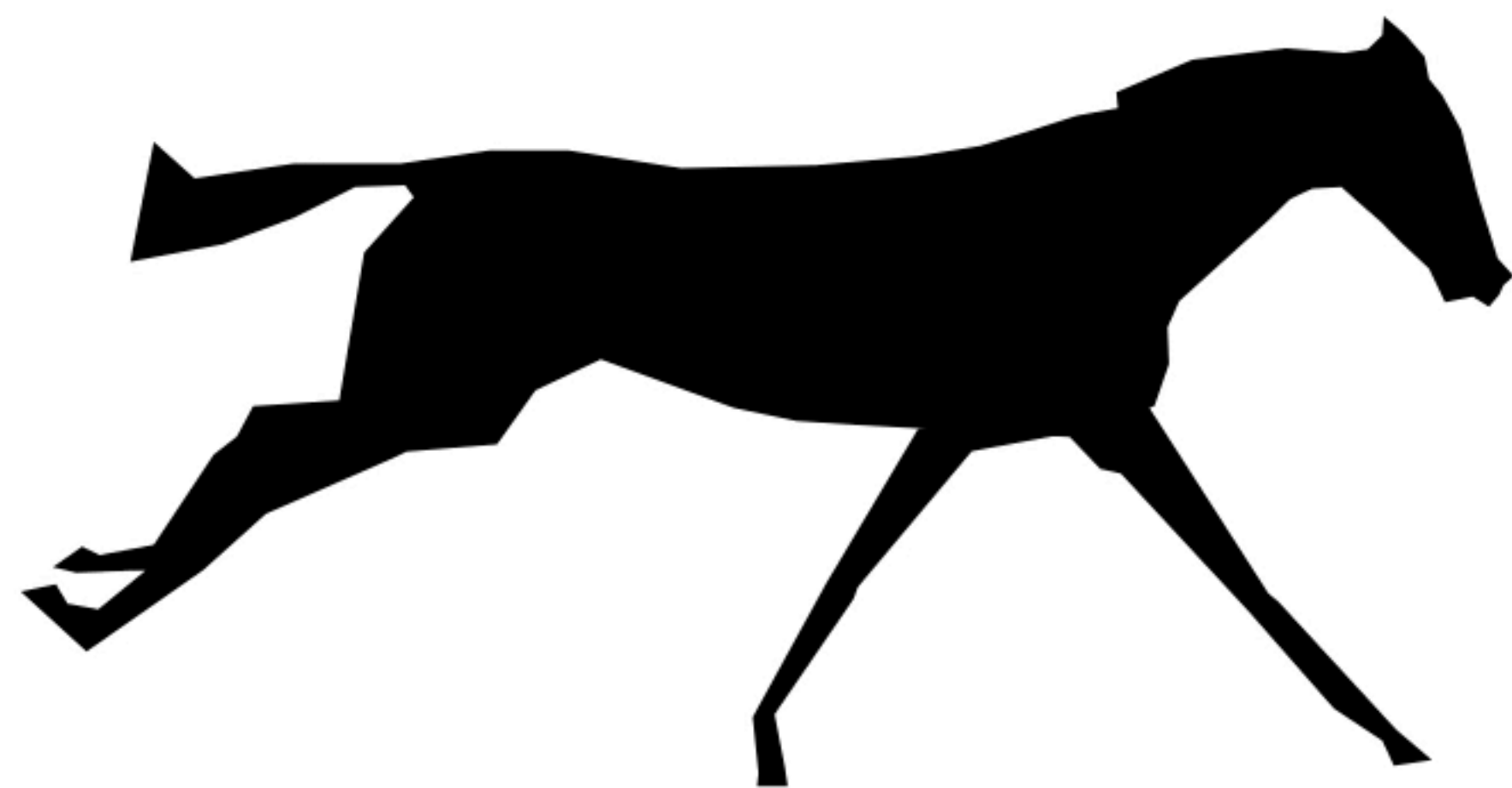**bowl size** and **bowl shape**.

b p d

I swear, I'm done with most of the talking!

Wanna **experiment**
with your projects?

NEWS

UK

NO-ONE CHARGED 'FOR 9 OUT OF 10 CRIMES'

🕐 42 minutes ago   🏴 117

Only 9% of crimes end with suspects being charged

PA

NEWS

UK

Morrisons 'quiet hour' for autistic shopping introduced

🕐 2 hours ago   🏴 131

BBC Breakfast's Tim Muffett goes shopping with Joanne Tang and her son Oscar, who has autism

Adapting the font design to the message, like this experimentation by the BBC

MERIT BADGE IS A VARIABLE COLOR FONT.

You can experiment with colours font and font variations

"AMPERSAND"

The Web Typography Conference
A day of inspiration and cutting edge
techniques from worldwide experts

★ ★ ★ ★ ★

29 JUNE 2018

Duke of York's Picturehouse, Brighton, UK

You can be **creative**,
while offering an **easy way for people to remove the custom font** if needed

Finally, I would advise you to follow David Jonathan Ross.

But also to read BBC's experimentations, and to visit v-fonts.com and axis-praxis.org.

One font file to rule them all. Ready to implement?

Merci beaucoup ! 🇫🇷   Bedankt! 🇳🇱

Thank you! 🇬🇧   Tack så mycket! 🇸🇪

Vielen Dank! 🇩🇪   Tusen takk! 🇳🇴

@iamhiwelo

Damien Senger

Queer designer who codes, specialised in accessibility and design systems.

raccoon.studio · noti.st/hiwelo

@iamhiwelo