ITI0209: User Interfaces

09. Design Systems - Continued

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Spring 2024
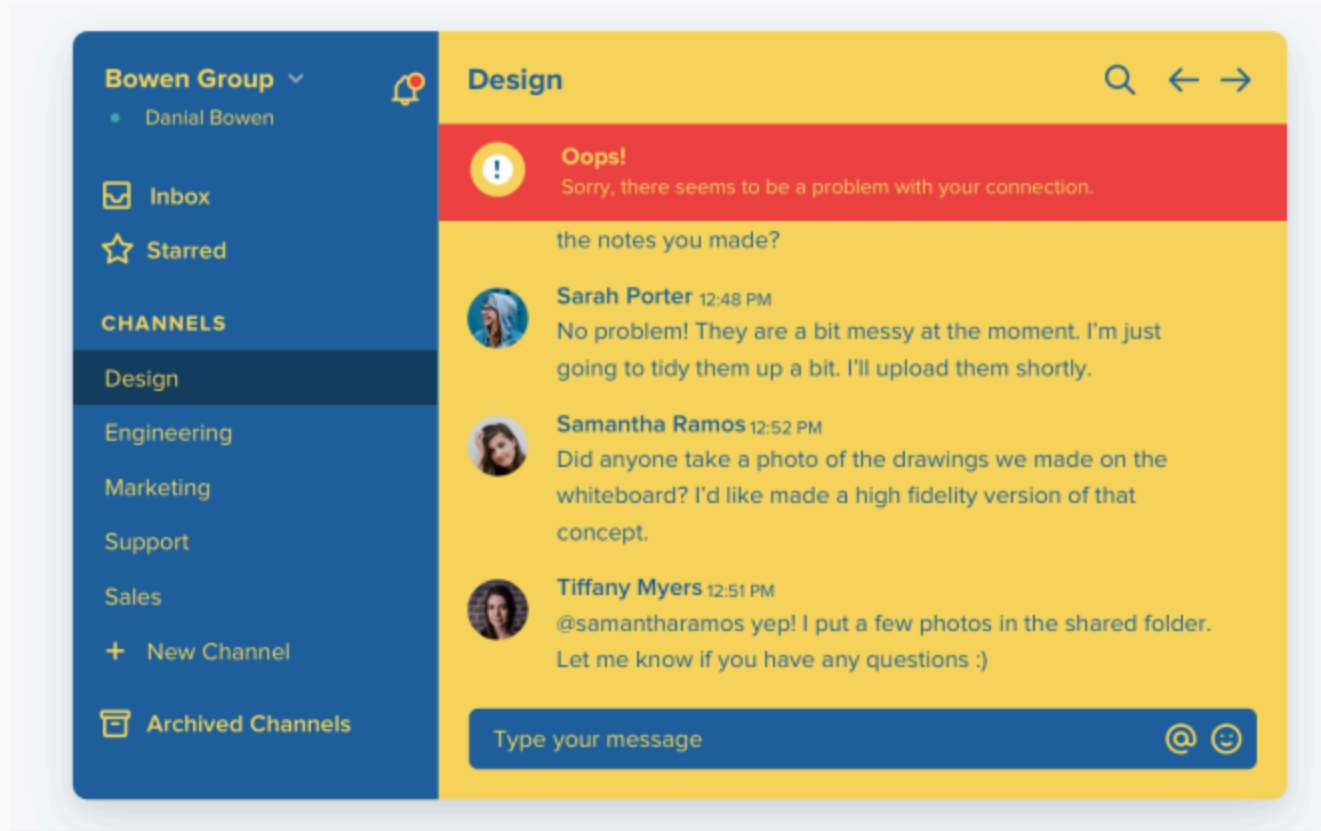
People notice first:

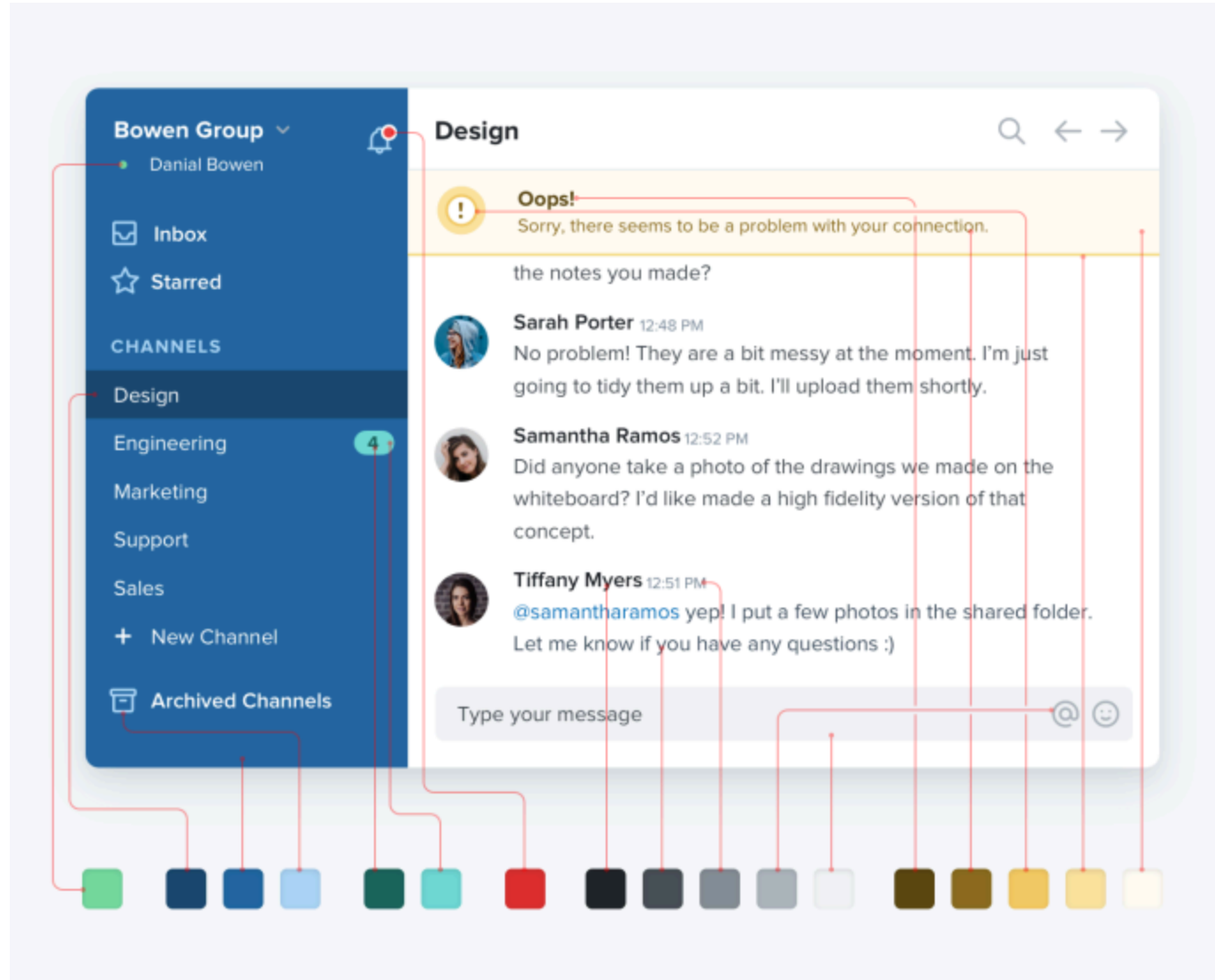**a shape Δ**
then color
and lastly content

Color

There's a lot of science out there on the psychology of color, but in practice, you really just need to pay attention to how different colors feel to you.

Choosing primary colors is not enough

You need more colors than you think

Choosing the colors

Preparation: make your layout design grayscale

Before choosing colors for your design, you should make the UI design grayscale so colors won't distract you. This decision will also swift your focus to the content and visual hierarchy of UI elements so you can tweak it before choosing the colors.

1. Select the base color

2. Create a color palette

3. Apply the palette to design

Principles of Color

1. **Keep it simple** – too many colours makes using them hard. One or two core colours are required for a logo. These colours shouldbecome the visual identifiers across different media.

2. The colours need to **complement each other**, yet have good contrast.

3. **Be distinctive** – check the colours your competition is using.

4. **Test, test and test** – how do the colours look on screen and in print, are there any cultural issues, do they stand out on different backgrounds?

5. Most importantly - your colours need to **express and enhance the meaning of your brand**, have relevance to your audience and last for a long time.

Choosing Primary Color

- **Red:** Coca-Cola or Nintendo – Implies excitement or happiness

- **Orange:** Nickelodeon or Fanta – Implies a friendly, fun time is ahead

- **Yellow:** Nikon or McDonalds – Implies optimism and happiness

- **Green:** Whole Foods or Animal Planet – Implies freshness and nature

- **Blue:** Walmart or American Express – Implies dependability and reassurance

- **Purple** Roku, Twitch – Purple is associated with royalty, fantasy, and flowers

- **Brown:** Nespresso or UPS – Implies a reliable product that can be used by anyone

- **Black:** Chanel or Prada – Implies luxury or elegance

- **White:** Apple or Nike – Implies sleek, user-friendly products

Tools

- **Coolors:** https://coolors.co

- **Colorsafe:** http://colorsafe.co/

- **Adobe Color:** https://color.adobe.com/

...

- **UXPro Collection of Color Tools:** https://uxpro.cc/toolbox/visual-design/colors/

Overall Tips for Style

Layout and Space

- White space should be removed, not added

- When designing for the web, white space is almost always added to a design - if something looks little too cramped, you add a bit of margin or padding until things look better.

- A better approach is to start by giving something way too much space, then remove it until it you're happy with the result.

Start layout with too much white space

Set up Two-Factor Authentication   STEP 1 OF 3

Every time you sign in to your account, you will
need your password and verification code

Setup your phone

Enter the phone number you would like to use.

Country

Phone Number

🇨🇦 Canada ⌄

+1 (555) 555-5555 ✓

Next Step

Start layout with too much white space

Set up Two-Factor Authentication   STEP 1 OF 3

Every time you sign in to your account, you will
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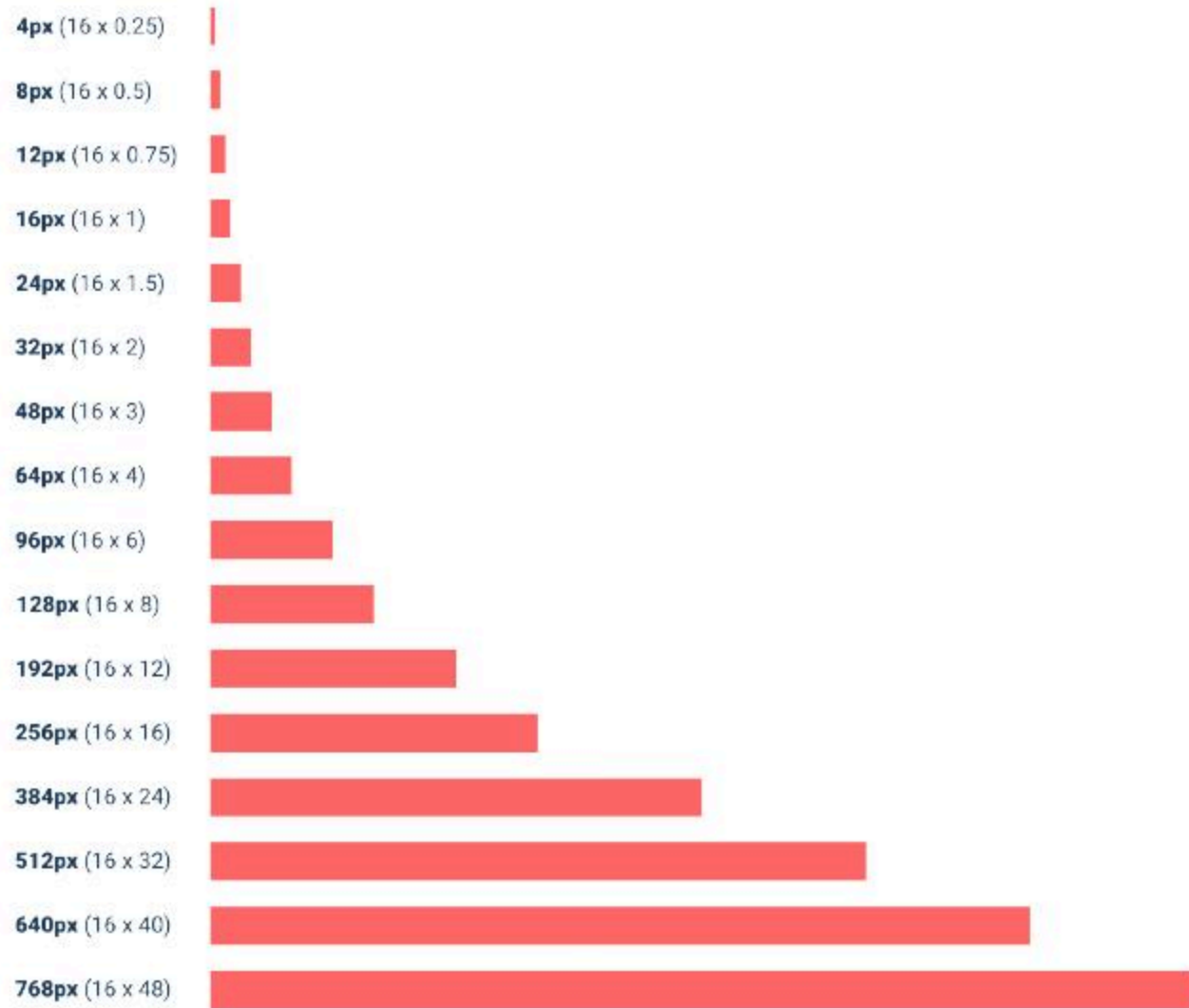🇨🇦 Canada ⌄   +1 (555) 555-5555 ✓   Next Step
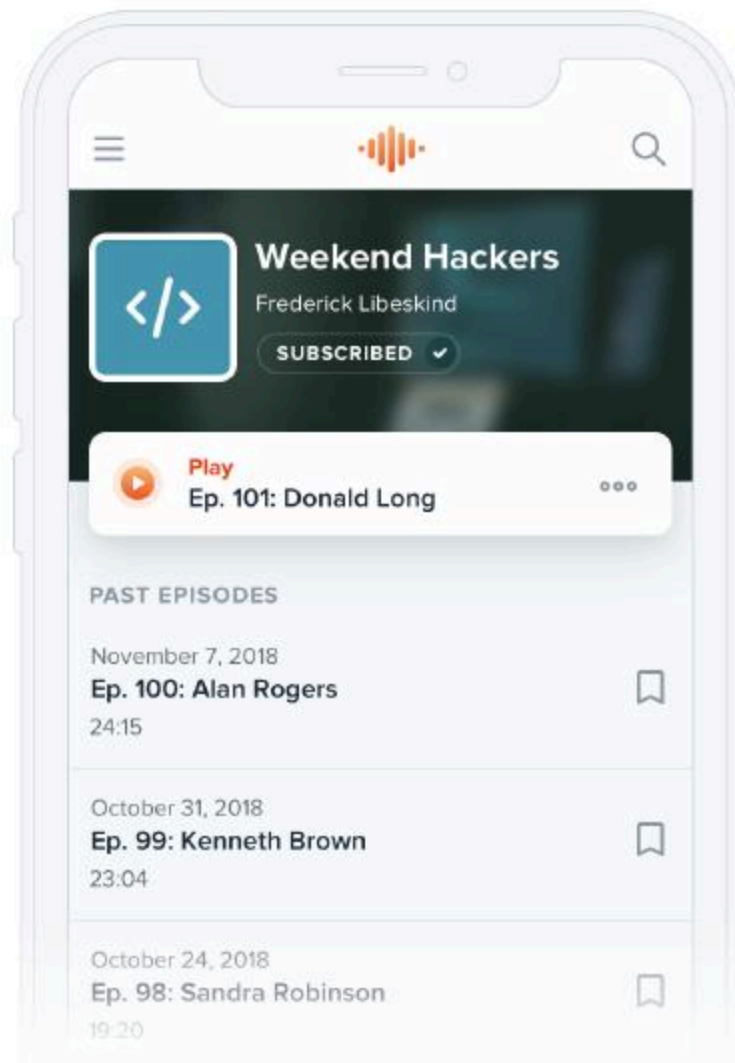
Establish a spacing and sizing system

- Limit yourself to a constrained set of values, defined in advance.

- If you want your system to make sizing decisions easy, make sure no two values in your scale are ever closer than about 25%.

- A simple approach is to start with a sensible base value, then build a scale using factors and multiples of that value.
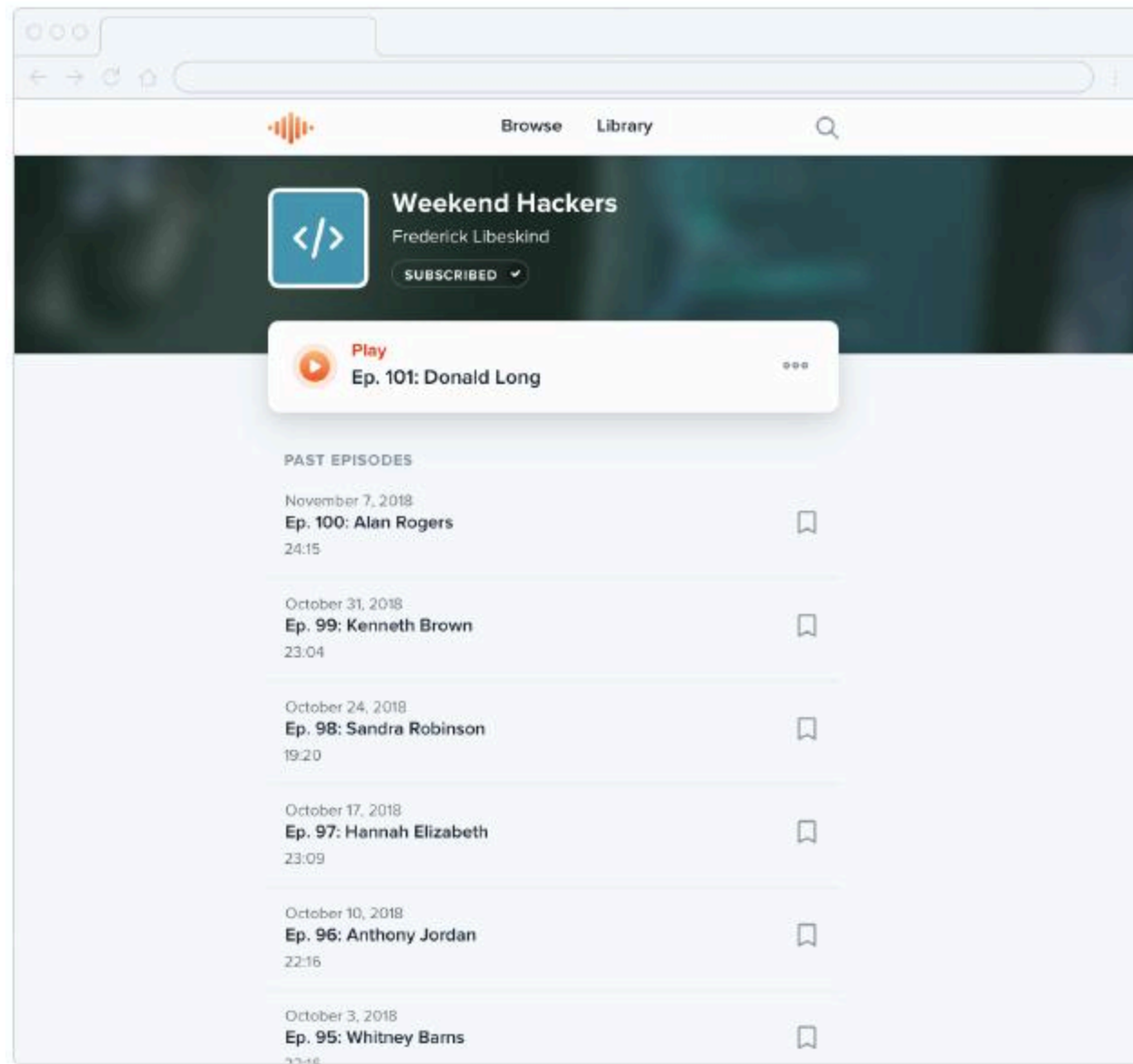
16px is a great number to start with because it divides nicely, and also happens to be the default font size in every major web browser.

4px (16 x 0.25)

8px (16 x 0.5)

12px (16 x 0.75)

16px (16 x 1)

24px (16 x 1.5)

32px (16 x 2)

48px (16 x 3)

64px (16 x 4)

96px (16 x 6)

128px (16 x 8)

192px (16 x 12)

256px (16 x 16)

384px (16 x 24)

512px (16 x 32)

640px (16 x 40)

768px (16 x 48)

You don't have to fill the whole screen

- If you only need 600px, use 600px. Spreading things out or making things unnecessarily wide just makes an interface harder to interpret, while a little extra space around the edges never hurt anyone.

- This is just as applicable to individual sections of an interface, too. You don't need to make everything full-width just because something else (like your navigation) is full-width.

Browse   Library   🔍

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Thinking in columns

If you're designing something that works best at a narrower width but feels unbalanced in the context of an otherwise wide UI, see if you can split it into columns instead of just making it wider.
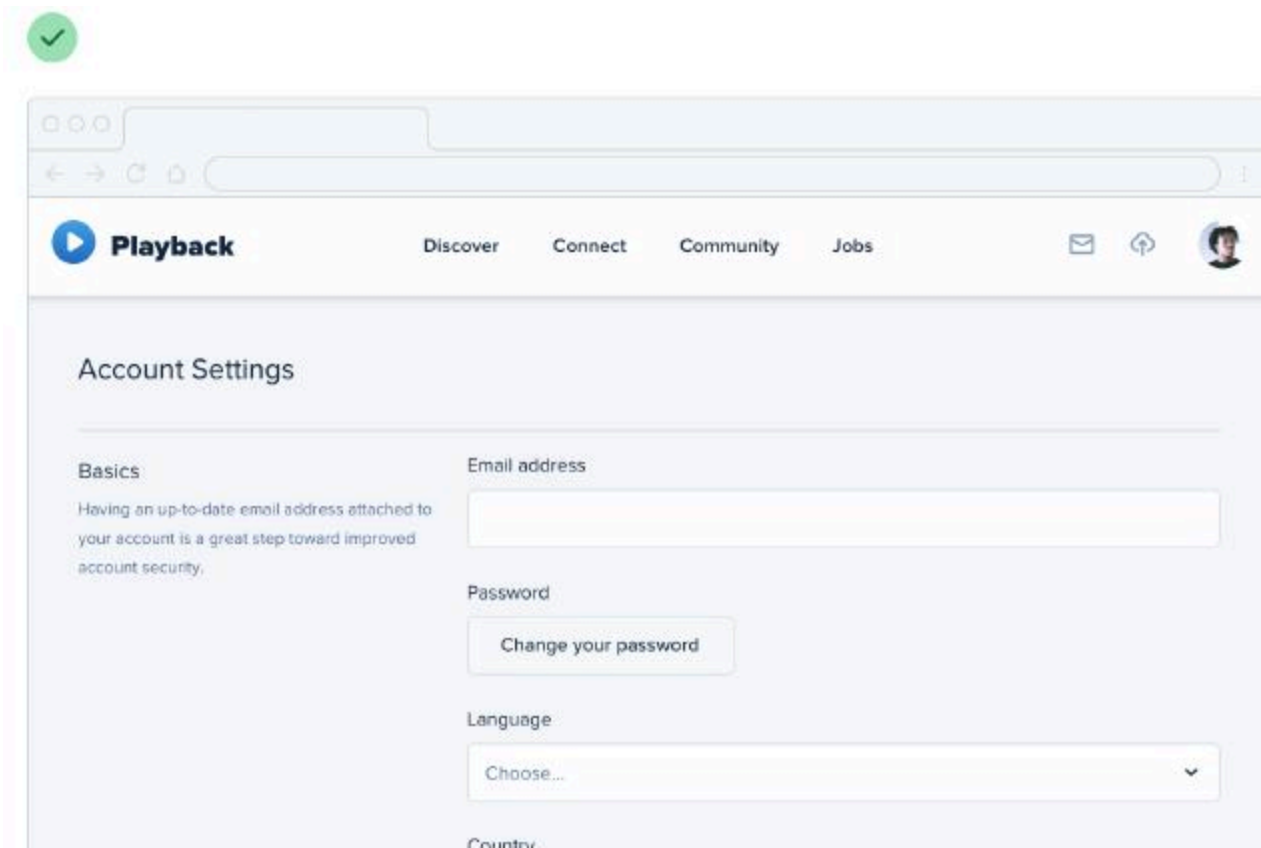
Avoid ambiguous spacing

- Relative sizing doesn't scale.

- When groups of elements are explicitly separated — usually by a border or background color — it's obvious which elements belong to which group.

- At best the user has to work harder to interpret the UI, and at worst it means accidentally putting the wrong data in the wrong field. The fix is to increase the space between each form group so it's clear which label belongs to which input.

JOIN OUR GROWING COMMUNITY

✓ Connect with accomplished founders in your local area and have
online conversations with others in the community.

24px

24px

✓ Partake in exclusive questioning sessions with investors,
executives and high-profile leaders.

✓ Pitch your concepts and get insights from other founders.

JOIN OUR GROWING COMMUNITY

✓ Connect with accomplished founders in your local area and have
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24px

36px

✓ Partake in exclusive questioning sessions with investors,
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✓ Pitch your concepts and get insights from other founders.

Keep your line length in check

- Too long lines make text hard to read. 75 characters per line is optimal width

- Line length isn't the only factor in choosing the right line-height — font size has a big impact as well.

- When text is small, extra line spacing is important because it makes it a lot easier for your eyes to find the next line when the text wraps.

- Line-height and font size are inversely proportional — use a taller line-height for small text and a shorter line-height for large text.

Line Length

Minimum 40 characters

sit essit velit, experum que non pa verspiet faccabo rendusant odit aut quas aut ide vendeli taeped minctus quam ipsam quam et ullis ipsant millaccum aut labori doluptat est, velit landande nulluptatur sinimi, qui volendi net Ehent plam videl ipid quiatium eum, sinvendae. Et verio ideremque volorrum harum, tetur serem int fuga. Et vide a consece rovitior adit atecum acestrum evention restotat.Olor aliquo omnima simus.Uditas doloritium, alicipsandi volupiet ipis in nus acias voluptiam, omnis parum aute corios olor barron omnis webster.

Narrower columns are read more quickly.

Maximum 75 characters

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Wider columns are read more slowly.

Alignment

- In general, text should be aligned to match the direction of the language it's written in, In general, text should be aligned to match the direction of the language it is written in.

- Center-alignment can look great for headlines or short, independent blocks of text.

- If you're designing a table that includes numbers, right-align them.

The one-size-fits-all solution

Build a beautiful website without touching
code. We'll provide you with all of the
tools and insights to grow your online
business. Our templates are all you need
to stand out from the rest of the
competition.

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competition.

Border Radius

- As small of a detail as it sounds, if and how much you round the corners in your design can have a big impact on the overall feel.

- A small border radius is pretty neutral, and doesn't really communicate much of a personality on its own

Large border radius starts to feel more playful:
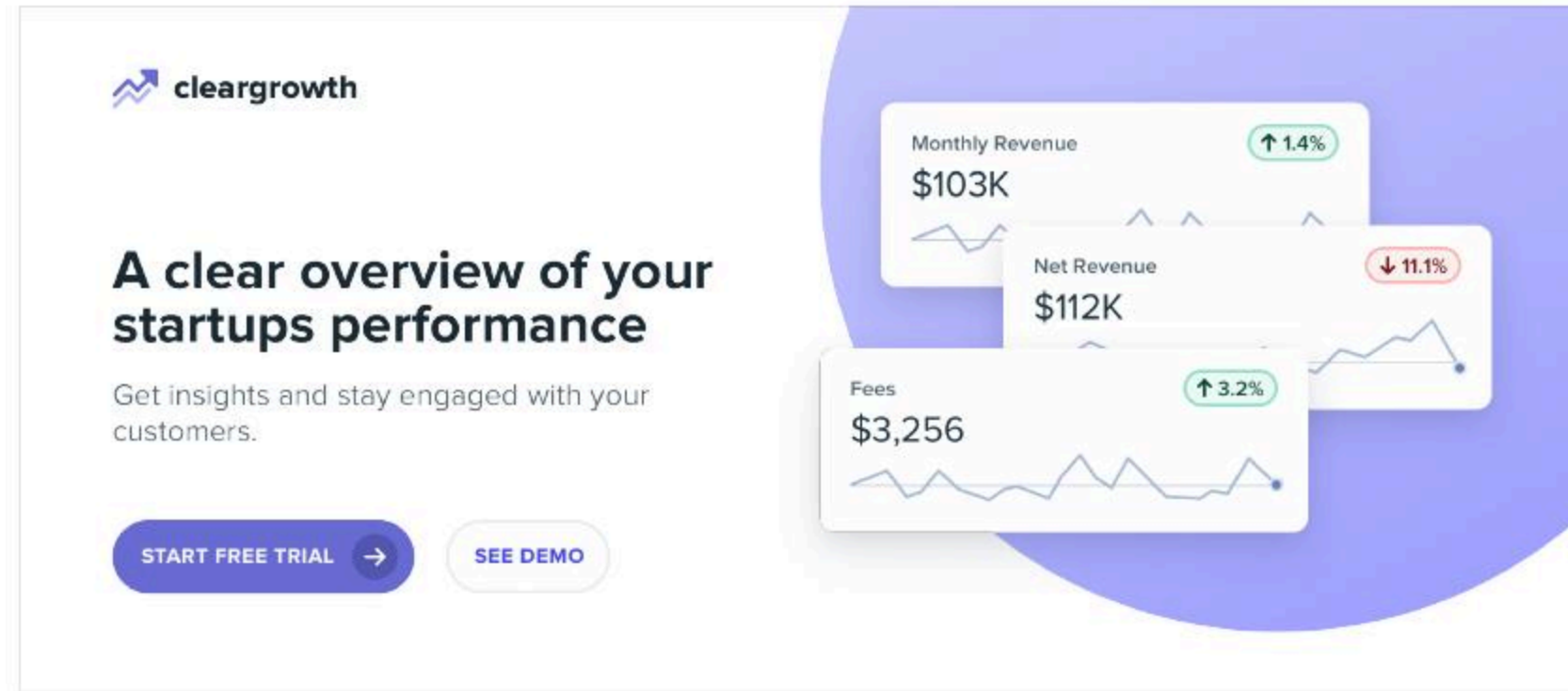
# No border radius at all feels a lot more serious or formal:
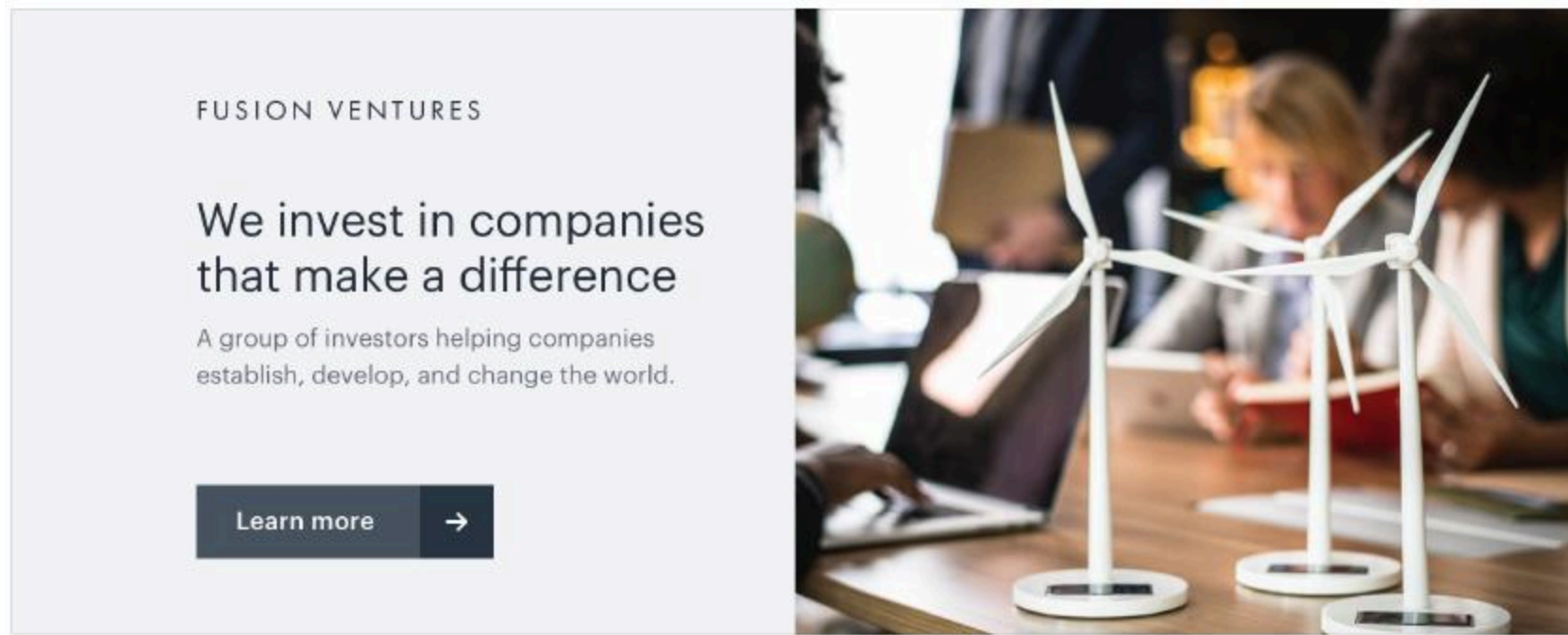
Don't use grey text on colored backgrounds

Making the text closer to the background color is what actually helps create hierarchy, not making it light grey. Choose a color with the same hue, and adjust the saturation and lightness until it looks right to you
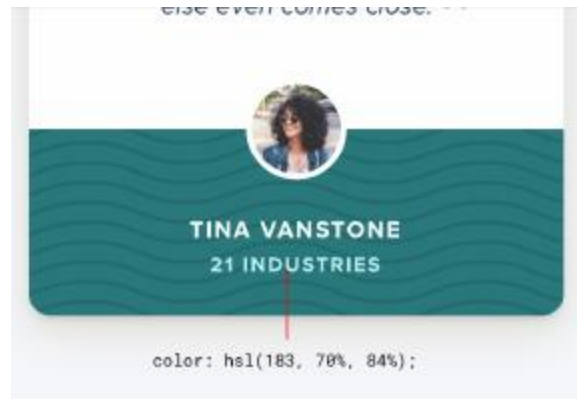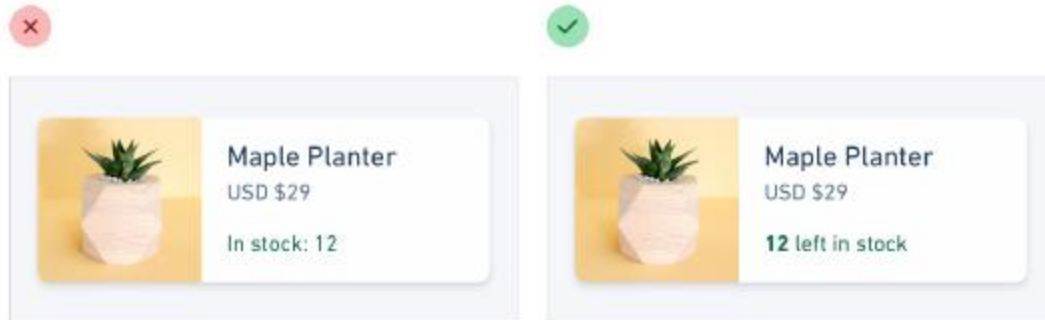
Emphasize by de-emphasizing

Sometimes you'll run into a situation where the main element of an interface isn't standing out enough, but there's nothing you can add to it to give it the emphasis it needs.
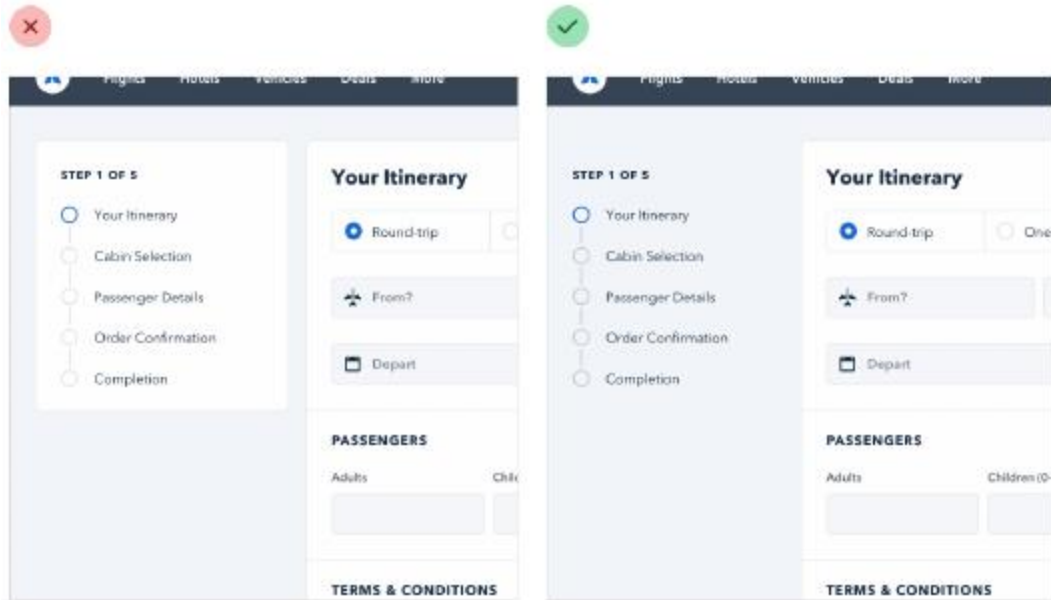
Combine labels and values

If you're building a real estate app, something like "Bedrooms: 3" could simply become "3 bedrooms".

Balance weight and contrast

The reason bold text feels emphasized is that in the same amount of space, more pixels are used for text than for the background. A simple and effective way to balance this is to lower the contrast of the icon by giving it a softer color.
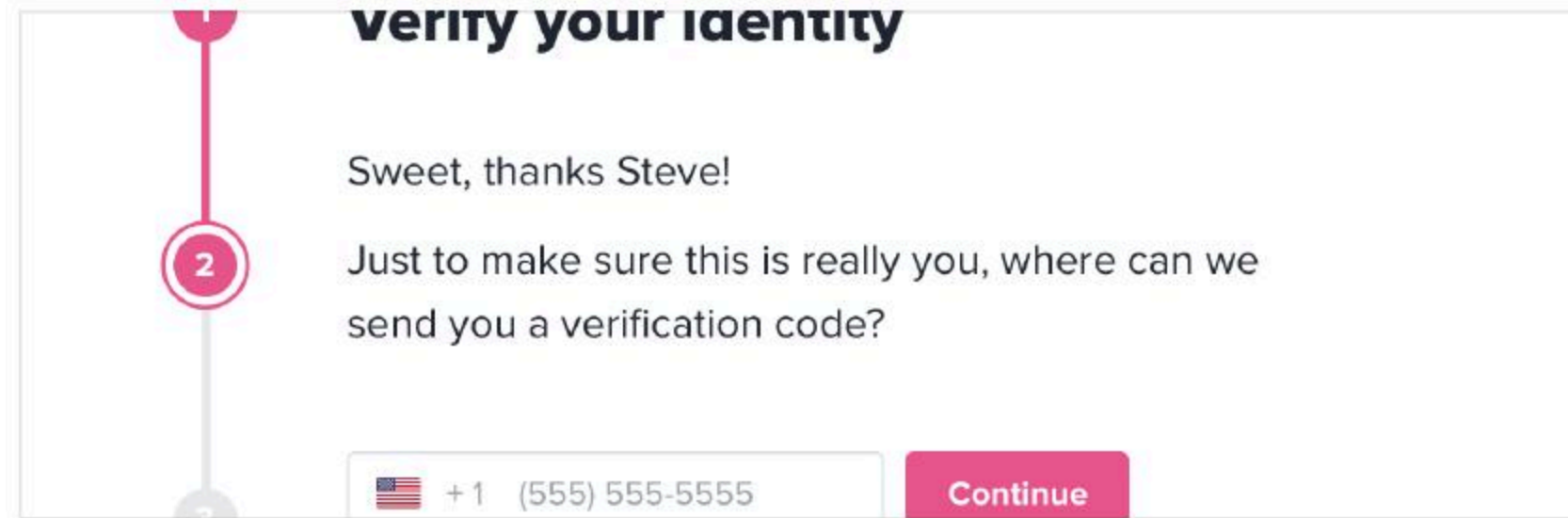

~90px²   ~50px²
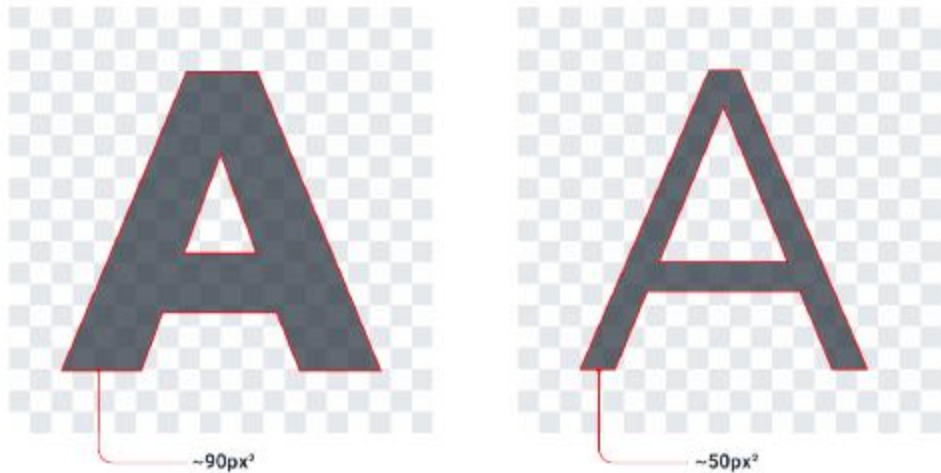
Language

- While not a visual design technique per se, the words you use in an interface have a massive influence on the overall personality.

- Using a less personal tone might feel more official or professional

- Using friendlier, more casual language makes a site feel, well, friendlier.

See also: https://rockcontent.com/blog/google-tool-inclusive-language/

Language

Words are everywhere in a user interface, and choosing the right ones is just as (if not more) important than choosing the right color or typeface.

Examples of Design Systems

- Google Material Design System. https://material.io/

- Apple Human Interface Guidelines. https://developer.apple.com/design/

- Atlassian Design System. https://atlassian.design/

- Shopify Polaris. https://polaris.shopify.com/

- Uber Base Web. https://baseweb.design/

- Taltech. https://taltech.ee/brand

- Tartu Ülikool. https://ut-stiiliraamat.voog.com/

- UK Government Design System. https://design-system.service.gov.uk/

See also: Design Systems in Finland. https://github.com/viljamis/design-systems-in-finland

Refactoring UI

Adam Wathan, Steve Schoger

2018

https://www.refactoringui.com/

Design Systems. A practical guide to creating design languages for digital products.

Alla Kholmatova

2017

https://www.smashingmagazine.com/provide/eBooks/design-systems.pdf

Links

- Everything you need to know about Design Systems. https://uxdesign.cc/everything-you-need-to-know-about-design-systems-54b109851969#
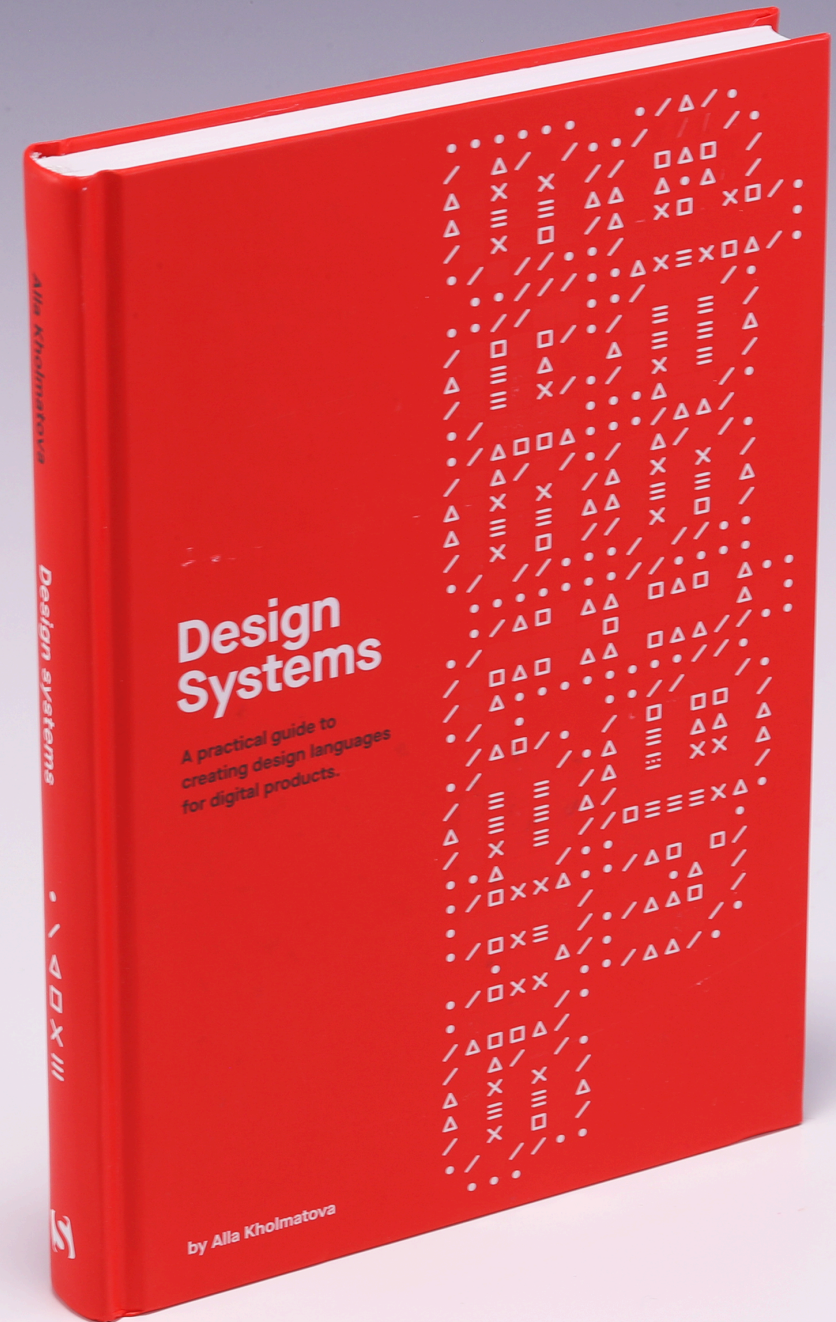
- A Brief Guide to Creating a UI Style Guide. https://xd.adobe.com/ideas/process/ui-design/ui-style-guide-template/

- 10 great design systems and how to learn (and steal) from them https://uxdesign.cc/10-great-design-systems-and-how-to-learn-and-steal-from-them-4b9c6f168fa6

- Typography for Developers. https://css-tricks.com/typography-for-developers/

- How to Use web fonts. https://blog.logrocket.com/how-to-use-web-fonts-in-css-a0326f4d6a4d

Thank you!