

CS-639 — Interaction Design Studio

Typography, Icons & Intelligent Affordances*

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Welcome Back!

- **Last week:** Design elements & principles — the building blocks
- **This week:** Typography, icons, and how interfaces signal interactivity
- **New focus:** How do we show something is intelligent?

Today's Journey

1. Typography as a system
2. Icons & visual communication
3. Traditional affordances
4. Signaling intelligent features

Typography Systems

**Type is not decoration or just
"text" — it's structure**

What Does "Structure" Mean?

Type creates hierarchy

Size, weight, and spacing
tell users what to read
first

Type organizes information

Groups related content,
separates unrelated
content

Type guides attention

Bold draws the eye;
lighter weight recedes

Type signals meaning

Labels vs. values, primary
vs. secondary actions

What is Type?

Type: Printed letters and characters of language.



Key Terms

- **Font:** The style in which type is created (e.g., Helvetica Bold 12pt)
- **Typeface:** A font family with variations that follow the same style (e.g., Helvetica)
- **Glyph:** A particular character (e.g., the letter "A" or the symbol "&")

Categories of Typefaces

1. Old style
2. Modern
3. Slab serif
4. Sans serif
5. Script
6. Decorative

Old-Style Fonts

- Serifs that **taper** toward the tip
- Low contrast, diagonal stress
- Classic, traditional feel

Examples: Garamond, Times, Palatino

Garamond

Aa Bb Cc Dd

Ee Ff Gg Hh

Ii Jj C.I540

Kk Ll Mm Nn

Oo Pp Qq Rr

Claude Ss Tt

Uu Garamond

Vv Ww Xx Yy

Zz # oo oi

02 03 04 05

06 07 08 09



Modern & Slab-Serif Fonts

Modern: High contrast, vertical stress, elegant

Examples: Bodoni, Didot

Slab Serif: Uniform stroke, block-like serifs, bold

Examples: Rockwell, Courier



Sans-Serif Fonts

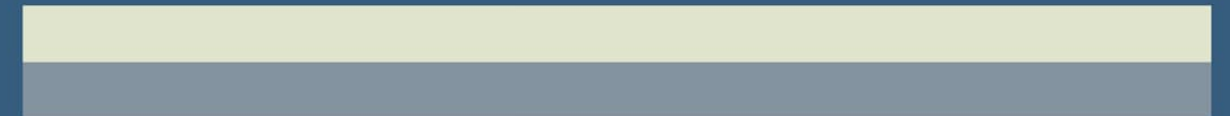
- **No serifs**, uniform stroke weight
- Clean, modern, neutral
- High legibility on screens

Examples: Helvetica, Arial, SF Pro, Roboto

1928

Gill Sans ^{Monotype}

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
#0123456789



Script & Decorative Fonts

Script: Simulate cursive writing; glyphs connect

Use sparingly — logos, invitations, accent text

Decorative: Convey context or feeling (gothic, retro)

Use very sparingly — headlines, branding only



*The
Royal
Denim* '73

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque maximus nisl ac purus lobortis, nec efficitur erat scelerisque. Sed efficitur, lacus vel lacinia luctus, felis arcu consectetur nibh, aliquet pharetra nisi ex quis felis.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque maximus nisl ac purus lobortis, nec efficitur erat scelerisque. Sed efficitur, lacus vel lacinia luctus, felis arcu consectetur nibh, aliquet pharetra nisi ex quis felis.

ORDER NOW

Font Parameters

- **Style:** Regular, Bold, Italic, Oblique
- **Caps:** ALL CAPS, Small Caps
- **Weight:** Light → Regular → Medium → Bold → Black

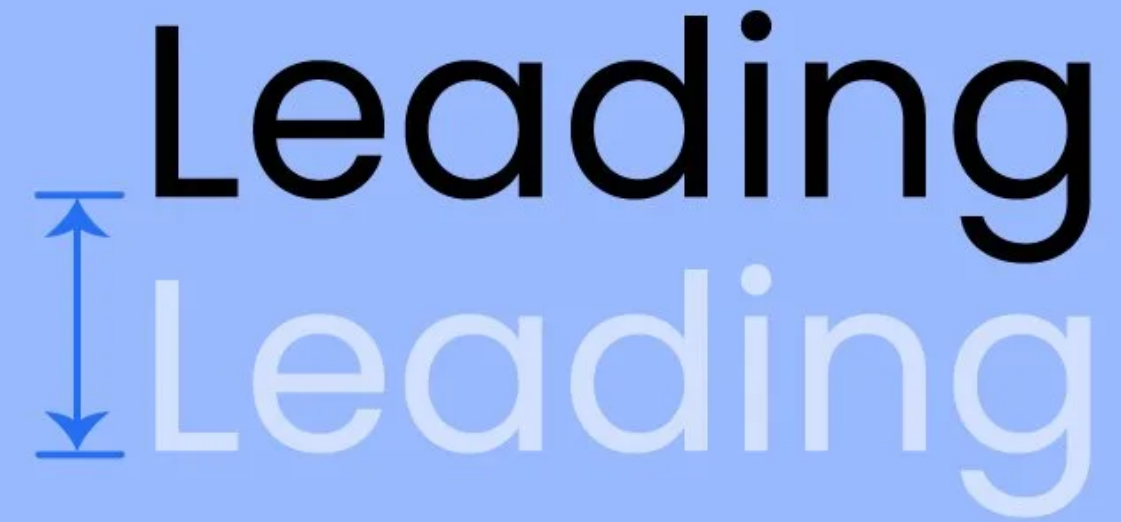
Roboto
SUNGLASSES
Self-driving robot ice cream truck
Fudgesicles only 25¢
ICE CREAM
Marshmallows & almonds
#9876543210
Music around the block
Summer heat rising up from the boardwalk

Thin
Thin Italic
Light
Light Italic
Regular
Regular Italic
Medium
Medium Italic
Bold
Bold Italic
Black
Black Italic

Type Spacing/

- **Leading:** vertical line spacing
- **Tracking:** overall letter spacing
- **Kerning:** space between letter pairs

Leading

A diagram illustrating the concept of leading, which is the vertical line spacing between two lines of text. It shows the word "Leading" in black on the top line and "Leading" in light blue on the bottom line. A vertical blue double-headed arrow is positioned between the two lines of text, indicating the distance between them.

Tracking

A diagram illustrating the concept of tracking, which is the overall letter spacing. It shows the word "Tracking" in black. A horizontal blue double-headed arrow is positioned below the word, spanning its entire width to indicate the overall spacing between the first and last letters.

Kerning

A diagram illustrating the concept of kerning, which is the space between specific letter pairs. It shows the word "Kerning" in black. A vertical white line is placed between the 'n' and 'g'. A horizontal blue double-headed arrow is positioned at the bottom, between the vertical line and the 'g', indicating the specific space between these two letters.

The Type Scale

A consistent set of sizes creates rhythm and hierarchy

What is Typographic Scale ?	H1	73.24px 3.052rem
What is Typographic Scale ?	H2	58.59px 2.441rem
What is Typographic Scale ?	H3	46.88px 1.953rem
What is Typographic Scale ?	H4	37.50px 1.563rem
What is Typographic Scale ?	H5	30.00px 1.25rem
What is Typographic Scale ?	BASE(BODY)	24.00px 1rem
Hello World	SMALL TEXT	19.20px 0.8rem
Hello World	CAPTION TEXT	15.36px 0.64rem
Hello World	SMALL PRINT	12.29px 0.512rem

Weight Creates Emphasis

Bold draws attention

Regular provides
readability

Italic adds nuance or
emphasis

- Use **bold** for labels, buttons, key info
- Use regular for body text, descriptions
- Use *italic* sparingly—for quotes, terms, or subtle emphasis

Spacing Matters

- **Line height:** Space between lines (typically 1.4–1.6× font size)
- **Letter spacing:** Space between characters (tighter for headlines, looser for small caps)
- **Paragraph spacing:** Breathing room between blocks

Good spacing makes text *inviting*. Poor spacing makes it *exhausting*.

Hierarchy Through Type Alone

Size, weight, and spacing guide the eye through content

No hierarchy

TYPOGRAPHIC HIERARCHY
How to use typographic hierarchy to create a website design that’s cohesive, visually attractive, and engaging for your reader.

Three levels of typographic hierarchy

1

TYPOGRAPHIC HIERARCHY

2

How to use typographic hierarchy to create a website design that’s cohesive, visually attractive, and engaging for your reader.

3

Typographic hierarchy sounds like a technical design term, but it’s a simple technique that you’re probably already familiar with. In fact, you see it used all the time in both print and online media. For example, If you look at any website, you will find that the text is the most important component of the website content. Images are added throughout the site to help generate interest, but ultimately, it is the typographic hierarchy that creates a cohesive, visually attractive, and interesting experience for your reader.

LEVEL 1
headline

LEVEL 2
subhead

LEVEL 3
text

JOURNAL REPORT

C-SUITE STRATEGIES

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THE WALL STREET JOURNAL.

Monday, March 30, 2020 | R1

I’ve Worked From Home for 22 Years. Here’s What I’ve Learned.

The rules change when you move from an office to your spare room. Here’s how to be both productive and healthy.

By ALEXANDRA SAMUEL

H

ow do you balance productivity with health and well-being when you’re working from home, rather than at the office?

It is a question many people are now grappling with for the first time, as Covid-19 closes many workplaces and sends people into the relative isolation of the home office. But in our house, it is business as usual: I’ve worked from home for the most of the past 22 years, and for the past four, my husband and I have worked from home together. (And we still like each other!)

But I’ll be honest: The first time I found myself working from home, in my mid-20s, I had a tough time. And since then, to make sure I don’t sink into any more funks, I’ve been very conscientious about staying connected to the outside world, balancing my productivity with what’s good for my mental health.

That is more challenging for me now, just as it is for everyone else: I really miss the

coffee shop where I usually spend at least three workdays a week. But it is possible, because I already have some basic habits in place that ensure home-based work doesn’t compromise my well-being.

Here are my secrets:

Let go of the eight-hour day.

If you’re working in an office, much of your eight-hour “workday” is made up of meetings in which you’re mostly listening, in addition to water-cooler chat, collegial conversations and random interruptions. When I’ve worked at an office, I’ve considered it a good day if I get 4 hours of decent work time. Since my solo workdays are uninterrupted, I can get more done in 5 hours than I’d accomplish in 8 hours at the office. Conversely, if I consistently work more than 5 or 6 hours at a stretch, I can get really burned out and isolated.

So I try not to get hung up on whether the clock on the wall says 5 p.m.; my workday ends when I’ve completed the work I need to get done, and if I reach my limit or get restless before then, I take an extended break or get outside for a walk.

I also try to book in video or phone calls to make sure I get human interaction. On days when I don’t have many business calls, I try to call at least one friend or family member in the midafternoon, when my productivity starts to flag. If I have brainless tasks like clearing out my inbox or invoicing clients, I take care of that later in the evening, after I’ve had a chance to refresh and interact with some humans.

Choose three things a day.

When you aren’t using the business day to decide when work starts and ends, you need some other structure that lets you know when you’ve put in a

Please turn to page R2



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Real-World Type Systems

Apple Human Interface Guidelines

- SF Pro system font
- Dynamic Type for accessibility
- Clear weight distinctions

Google Material Design

- Roboto / Google Sans
- Type scale with semantic names
- Emphasis through weight, not size

Your Turn: Type Hierarchy

Look at your phone's Settings app.

- How many type sizes do you count?
- How is weight used?
- What creates the hierarchy?

Icons & Visual Communication

Pictures that speak

What is an Icon?





Icon: A simplified visual symbol that represents an object, action, or concept.

Icons communicate quickly across language barriers. They save space, aid recognition, and create visual consistency.





Universal vs. Learned Symbols

Universal:

- Play 
- Pause 
- Home 
- Search 

Learned:

- Hamburger menu 
- Share icon (varies by platform)
-  = like/favorite
- @ = mention

Icon Sizing & Consistency

- **Touch targets:** Minimum 44×44 points (Apple) or 48×48 dp (Material)
- **Optical alignment:** Icons should **feel** the same size, even if dimensions differ
- **Stroke weight:** Match your typography weight
- **Spacing:** Consistent padding around icons

Icons + Labels

When to use what?

Approach	When to use
Icon only	Universal symbols, space-constrained, expert users
Label only	Ambiguous actions, critical functions
Icon + label	Navigation, onboarding, accessibility

Traditional Affordances

**How form suggests
function**



Affordances vs. Signifiers

Affordance: What action is **possible**

Signifier: What **indicates** that action

A button **affords** pressing

A slider **affords** dragging

A raised shape with shadow **signifies** "press me"

A track with a handle **signifies** "drag me"

Button States

State	Visual Treatment
Default	Primary color, clear label
Hover	Slight color shift, cursor change
Pressed	Darker, slight depression
Disabled	Grayed out, no interaction
Loading	Spinner, disabled temporarily

Other Affordances

- **Toggles:** On/off, binary choice
- **Sliders:** Continuous value selection
- **Text inputs:** Blinking cursor, placeholder text
- **Gestures:** Swipe hints, pull-to-refresh indicators

Now... Something New

How do we signal intelligence?

The Intelligence Question

How do users know something is **intelligent**?

- When the system suggests something
- When it predicts your intent
- When it adapts automatically
- When it learns from you

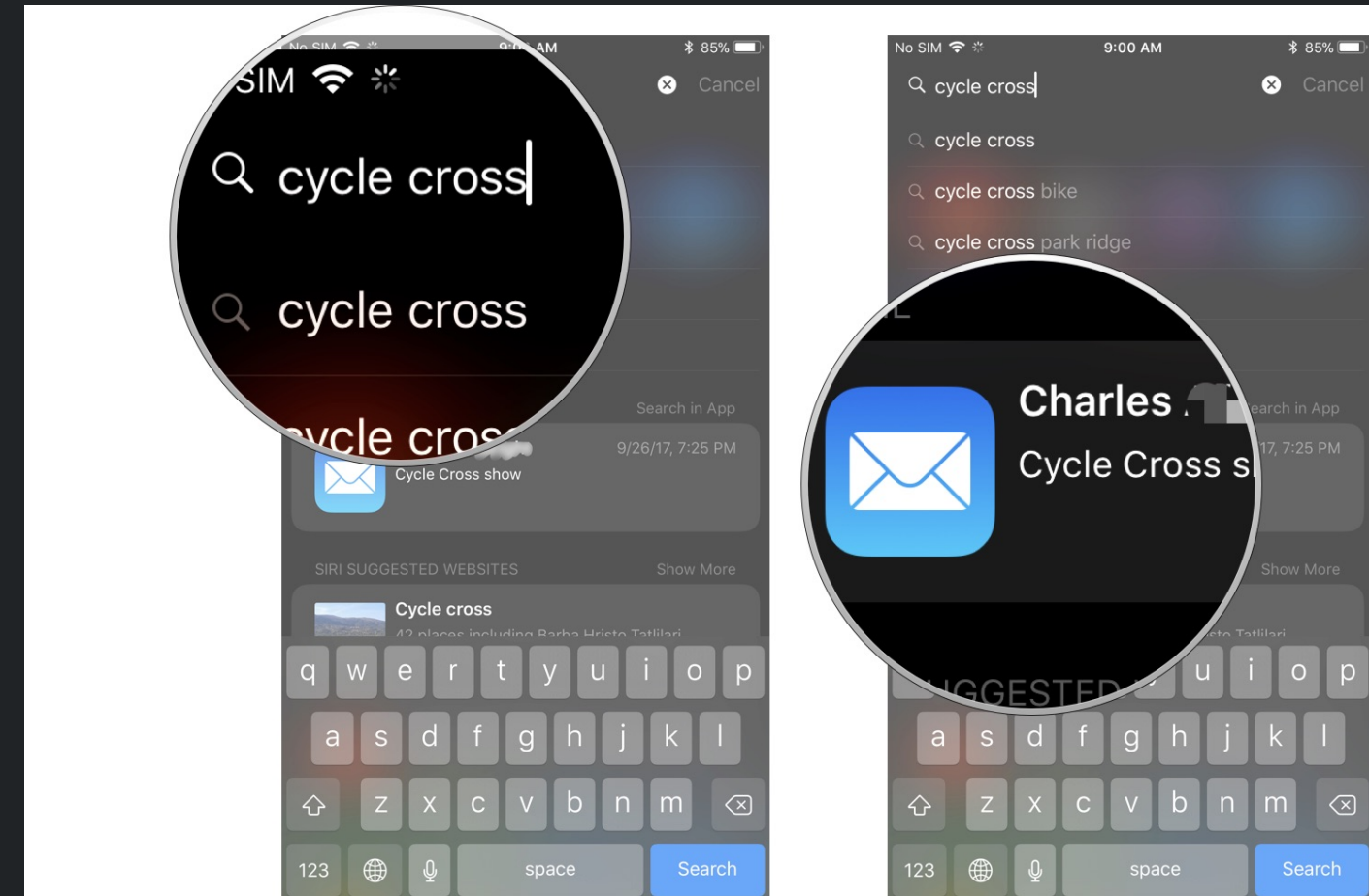
Case Study: Gmail Smart Compose

- Gray text suggests completions
- Tab to accept, keep typing to ignore
- Visually **subordinate** to user text



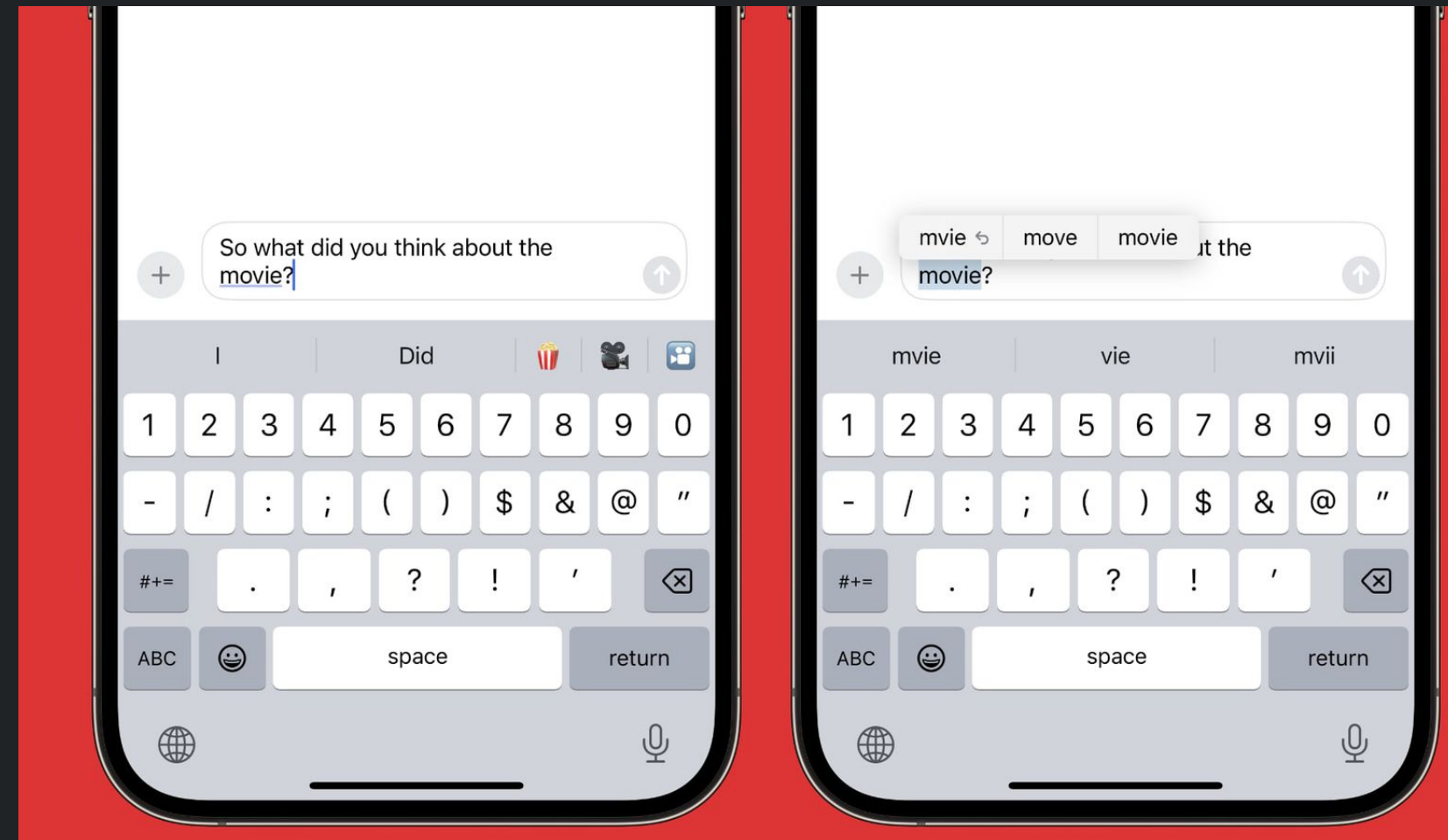
Case Study: iOS Spotlight Suggestions

- Suggestions appear **above** keyboard
- Based on time, location, activity
- Separate zone, transient appearance



Case Study: Autocorrect

- Underline indicates system intervention
- Tap to see alternatives
- Subtle, reversible, learns from you



Patterns for Intelligence Signaling

Pattern	Example
Lighter weight/color	Smart Compose gray text
Separate zone	Spotlight suggestions
Subtle indicator	Autocorrect underline
Transient appearance	Contextual suggestions
Easy dismiss	Swipe away, tap elsewhere

The Vocabulary of "Smart"

How do interfaces signal intelligence?

- **Sparkles** ✨ — "AI-powered" (becoming cliché)
- **Gradient shifts** — Dynamic, adaptive feel
- **Subtle animation** — System is "thinking"
- **Contextual appearance** — Shows up when relevant
- **Preview styling** — Distinct from committed content

Key Insight

Suggestions should be visually subordinate to user content.

- **User-created content:** Full weight, primary color
- **System suggestions:** Lighter weight, secondary color

The system offers. The user decides.

When Should Intelligence Be Visible?

Make it visible when:

- User might not know feature exists
- Accepting/rejecting matters
- Building user trust

Make it invisible when:

- Interruption costs outweigh benefits
- Action is routine/automatic
- Visibility creates clutter, anxiety

Takeaways from Today

1. **Typography is a system** — scale, weight, spacing
create hierarchy
2. **Icons communicate** — use them to clarify, not to
decorate
3. **Affordances guide action** — form should suggest
function
4. **Suggestions should be subordinate** — the system
offers, the user decides

Studio Challenge Preview

Design a Delightful, Intelligent Component

Create a single UI element that feels **delightful**
— and make intelligence part of what makes it special

The Challenge

What to design: A **card** — a bounded container that displays a summary of something. Cards preview content, surface information, and invite action.

Examples: Playlist tile, event card, message bubble, notification, search result, task item, contact card

Pick one, or choose a similar component from an app you use.

Design It Twice

Static

User controls everything.
Focus on typography,
spacing, and visual polish.

Intelligent

System offers a
suggestion. Show how
suggested content differs
visually from user content.

Design Goals

Your component should be:

- **Visually striking** — something you'd proudly put in a portfolio
- **Typographically refined** — intentional hierarchy, weight, spacing
- **Clear in its intelligence** — user vs. system content is unmistakable

The best intelligent UI feels like help, not interruption.

What to Show

For the **intelligent version**, use visual design to answer:

- How does **suggested content** differ from **user content**? (type weight, color)
- What **icons or indicators** signal "this is smart"?
- How do you **accept or dismiss** the suggestion?

Sketching Typography by Hand

You're not designing fonts — you're designing **relationships.**

Do this:

- Headlines BIG, body text small
- Thick markers = bold, thin pens = light
- Lines (— — —) for body

Don't worry about:

- Perfect letterforms
- Matching a specific font
- Writing every word

Studio Techniques

- **Gray markers** for suggestions (vs. black for committed)
- **Color studies** — what hue says "suggestion"?
- **Weight contrast** — light for offered, bold for committed
- **Subtle icons** — or no icons at all?

Reflection: Intelligence Safari

Go on a hunt through your phone. Find **3 intelligent features** and document:

1. **What it does** (one sentence)
2. **How you know it's intelligent** (visual cues)
3. **How you accept or dismiss it**

Screenshot and annotate each example.

Before Wednesday

- **Complete:** Intelligence Safari reflection (Canvas)
- **Choose:** Your component type (event card, message, search, etc.)

What's Next?

- **Wednesday:** Studio — Design your static + intelligent component
- **Friday:** Critique — Which designs are both beautiful and clear?
- **Next week:** Color, accessibility, and context-aware adaptation

References

- Norman, D. (1988). *The Design of Everyday Things*
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