

INTRODUCTION TO: Interaction Design

WEEK 06





DESIGN SYSTEMS

It is the entire product ecosystem. It communicates the “**what**,” the “**how**,” and the “**why**.” Design Systems are like the composers of a project, bringing together guidelines, rules, and reusable pieces to keep everything looking and working the same way.

Picture them as the project's instruction manual, explaining how everything should look and behave.

Style Guides: set the standards defining the elements' appearance and the overall voice and tone. The *visual language* of look and feel.

Component Libraries: contain the building blocks of a product. They focus on how assets should *behave* in the product.

Button Label •

Button Label •



Link label

Link label

World Peas

World Peas

= World Peas

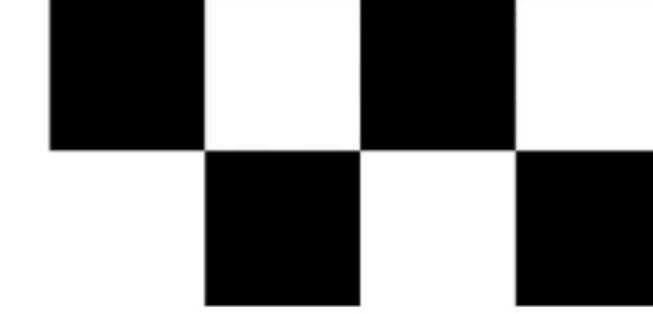
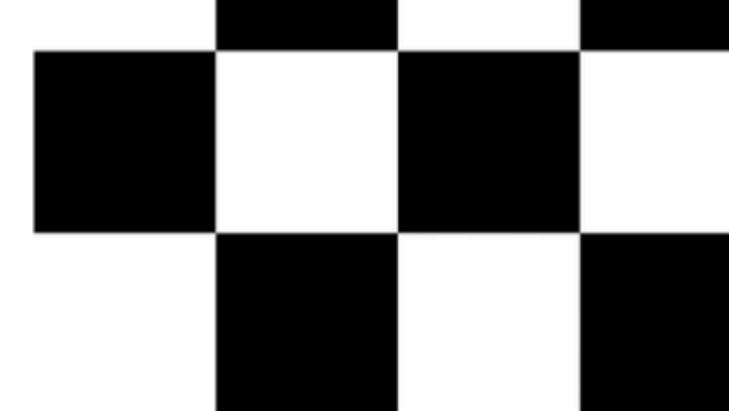


Add to basket



0 - +

X = < → √ ^ ► 🛒 🛒 ≡ 🗓️ ✉️ 📈 ⏷ + - ❤️ ❤️



Farm Fresh
Email Newsletter

Enter your email address

Email me about

- Sales and Promotions
- Harvests
- Articles and Recipes

Product name

\$0.00/qty

Product name

\$0.00/qty

Add to basket



Add to basket



Item name
\$0.00/qty

Sign me up



0 - +



DESIGN SYSTEM BENEFITS:

- Spend less time remaking components – increasing design outputs and focusing more time on solving problems.
- It makes onboarding team members or working in groups easier to share resources.
- It makes it easier to communicate with developers and able to translate designs into functional, accessible code
- As a design matures, it provides a shared vision and language to create more consistent products – creating easier theming.
- Removes redundancy and creates more efficiency



ESSENTIALLY YOU BUILD...

- Consistency Amplified
 - Efficiency Overdrive
 - Streamlined Collaboration
 - Future-Proof Flexibility

DESIGN INSPIRATION AND MOODBOARDS

× × × ×



DESIGN INSPIRATION AND CURATION

- A mood board is a collage of images used to organize visual and material inspiration used by Design Inspiration and Curation
- UI design, architecture, interior design, graphic design, and fashion.



MOODBOARDS:

WHAT

A moodboard is a type of visual presentation or a collage consisting of images, text, and samples of objects in a composition. It can be based on a set topic or can be any material chosen at random.

WHEN

- Gathering inspiration is part of a designer's continual practice.
- After collecting inspiration, UI designers use the moodboard for generating ideas (ideation) and creating models (prototype).

WHY

- To create designs that all users can truly use.
- To create designs that are as accessible as possible.
- To communicate how and why a software solution is designed for the widest range of users possible.



WHEN MAKING A MOODBOARD

-  Add notes explaining your thoughts.
-  Focus on composition, hierarchy, and scale.
-  Add some photography samples, colors, and fonts.
-  Add examples of motion or animation.
-  Collect any written inspiration or visual elements.
-  Choose a few high-level directions and be clear on what you want to achieve.
-  Ask for feedback.



WHEN MAKING A MOODBOARD

A client brief

Brief: Develop an identifiable logo and sample adverts for an aspiring clothing and lifestyle goods manufacturer with a big focus on the surf culture.

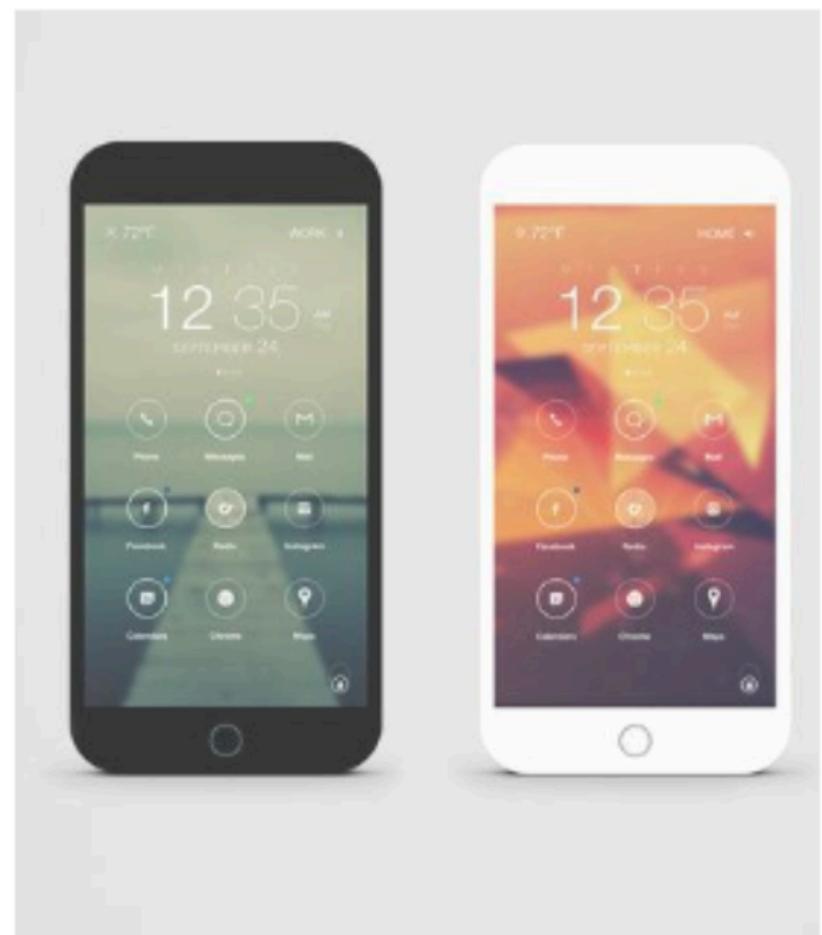
Introduction: Discussions with the clothing designer have revealed that their feelings towards surfing were based on nostalgia. Surfing had become too mainstream and surf brands had become high street, household names. The 'counter-culture' element of early surfing had been lost, and niche brands had been taken over as multinationals entered the market. Some favourite older brand identities included in early discussions were Quiksilver, Rusty, Town and Country:

<http://www.dropbox.com/files/asd8723652>

A project moodboard



A visual design solution



× × ×

MAIN ELEMENTS OF A DESIGN SYSTEM:

The Design Repository and the People who manage it.

Design repositories can take many forms, but they often contain
a style guide, a component library, and a pattern library.



STYLE GUIDES:

Style guides **contain specific implementation guidelines, visual references, and design principles** for creating interfaces or other design deliverables.

The most common style guides tend to focus on **branding** (colours, typography, trademarks, logos, and print media), but they also offer **guidance on content** (such as tone of voice and language recommendations) and **visual- and interaction-design standards** (also known as front-end style guides).

These guidelines are sometimes incorporated into the component library to provide relevant guidance in context.

STYLE GUIDES:

s/t

UI Style Guide

Color

#RED #GREEN #YELLOW #BLUE
#BLACK #SHARK #CHARCOAL GRAY #SHUTTLE GRAY #SLATE GRAY #WHITE

Font

FONT FAMILY
Montserrat Regular
Montserrat Light

Typography

Header 1 84pt/92pt
Header 2 48pt/60pt
Header 3 36pt/48pt
Header 4 30pt/42pt
Header 5 24pt/32pt

COMMENTS

new jam is cool
the end needs some work
yeah awesome!

Type a message...

LISTS

blank #9 1:45 ...
heartbeat in the brain 11:01 ...
Picture Of A Tree That... 0:49 ...

Update Email ▶
Update Password ▶

Search contacts ▶
Search Facebook ▶
Enter email address ▶

FORMS

Email justinrenninger@gmail.com
Password ••••••••

LOG IN

COLOR PALETTE

| | | |
|--|--------------------|---------|
| | CANDY APPLE | #682535 |
| | CRIMSON | #c92830 |
| | COOL BLUE | #074f67 |
| | DEEP LAKE | #143548 |
| | GRAVEL | #565656 |
| | WET CEMENT | #778488 |
| | CLOUDY | #f0f5f7 |
| | SNOW | #fffaff |

TYPOGRAPHY

Header 1
Font: Montserrat Bold / Color #M3548

HEADER 2
Font: Montserrat Bold / Color #A43548

HEADER 3
Font: Montserrat Bold / Color #074f67

HEADER 4
Font: Montserrat Bold / Color #074f67

Header 5
Font: Montserrat Bold / Color #565656

This is Body copy. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent eu semper ligula, nec fermentum odio. Aenean non blandit neque, ac accumsan nibh. Morbi elementum neque id sodales blandit. Morbi eget turpis in urna sodales pharetra. Aenean quis pulvinar lacus, sed lacinia sem.

[This is an inline link.](#)

Font: Libre Baskerville / Color #565656

BUTTONS

Button Button Button

Button Button Button

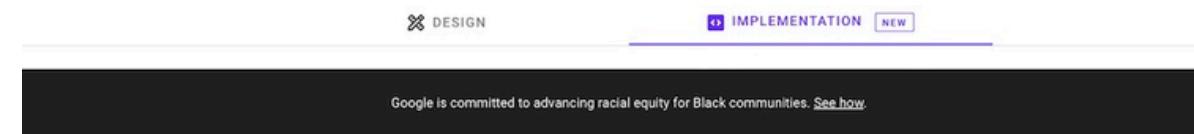


COMPONENT LIBRARY

Component libraries are thorough collections of predetermined, reusable UI elements. They serve as a one-stop shop for designers and developers to learn about and implement specific UI elements. They typically include:

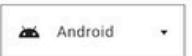
- Component name: A specific and unique UI component name to avoid miscommunication.
- Description: A clear explanation of the element and its typical usage, occasionally with do's and don'ts.
- Attributes: Variables or adjustments to customize the component (e.g., colour, size, shape, copy).
- State: Recommended defaults and changes in appearance.
- Code snippets: The actual code for the element, sometimes with multiple examples and a "sandbox" environment for customization.
- Frameworks: Front-end and back-end frameworks to implement the library, avoiding unnecessary debugging.

COMPONENT LIBRARY



Radio buttons

Radio buttons allow users to select one option from a set.



CONTENTS

Using radio buttons

Before you can use Material radio buttons, you need to add a dependency to the Material Components for Android library. For more information, go to the [Getting started](#) page.

Note: <RadioButton> is auto-inflated as <com.google.android.material.button.MaterialRadioButton> via `MaterialComponentsViewInflater` when using a non-Bridge `Theme.MaterialComponents.*` theme.

Making radio buttons accessible

Radio buttons support content labeling for accessibility and are readable by most screen readers, such as TalkBack. Text rendered in radio buttons is automatically provided to accessibility services. Additional content labels are usually unnecessary.

Grouping radio buttons

Changes in the states of one radio button can affect other buttons in the group. Specifically, selecting a `RadioButton` in a `RadioGroup` will de-select all other buttons in that group. See the [example section](#) below for implementation details.

Radio button

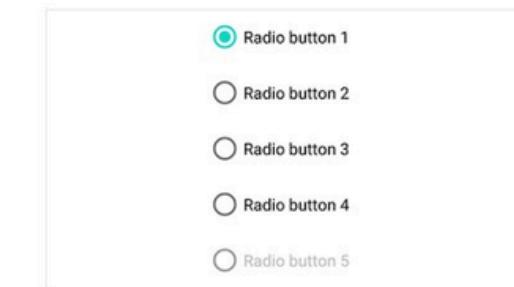
A radio button is a circle that is filled in with an inset when selected. Radio buttons allow the user to select one option from a set. Use radio buttons when the user needs to see all available options. If available options can be collapsed, consider using a dropdown menu because it uses less space.

Radio buttons example

API and source code:

- `MaterialRadioButton`
 - [Class definition](#)
 - [Class source](#)
- `RadioGroup`
 - [Class definition](#)

The following example shows a radio button group with five radio buttons.



In the layout:

```
<RadioGroup  
    android:id="@+id/radioGroup"  
    android:checkedButton="@+id/radio_button_1"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content">  
  
<RadioButton  
    android:id="@+id/radio_button_1"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:text="@string/label_1"/>  
  
<RadioButton  
    android:id="@+id/radio_button_2"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:text="@string/label_2"/>  
  
<RadioButton  
    android:id="@+id/radio_button_3"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:text="@string/label_3"/>  
  
<RadioButton  
    android:id="@+id/radio_button_4"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"
```

Google's [Material Design system](#) features a component library which includes implementation guidelines and code snippets (shown above) for specific operating systems and frameworks, as well as thorough design guidelines with usability do's and don'ts in a separate tab.



PATTERN LIBRARY

Pattern libraries feature collections of UI-element groupings or layouts.

Pattern libraries are less robust but can be as thorough as needed. They typically feature content structures, layouts, and/or templates meant to be reused and adapted.

The screenshot shows the Atlassian Design System interface. The top navigation bar includes the Atlassian logo, 'ATLASSIAN Design System', and links for Brand, Foundations, Content, Components, Patterns (which is highlighted in blue), and Resources. A search bar is also present. On the left, a sidebar titled 'PATTERNS' lists various components: Benefits modal, First impressions, Forms, Inline edit, Media picker, Messages, Page header (which is selected and highlighted in grey), and Spotlight. The main content area is titled 'Page header'. It describes the page header as the first section people see before scrolling, providing core information. Below this is a detailed description of the page header pattern, stating it helps define the uppermost part of a webpage or product. It includes a diagram of a standard page header with numbered callouts: 1. Grid/page, 2. Breadcrumb, 3. Page title, 4. Buttons (Primary action, Secondary action, and three dots), and 5. Search bar/filter. The footer contains copyright information for Atlassian and links to Careers, Trademark, Privacy, and License.

ATLASSIAN Design System

Brand Foundations Content Components Patterns Resources

Search

PATTERNS

Benefits modal

First impressions

Forms

Inline edit

Media picker

Messages

Page header

Spotlight

Page header

The page header is the first section people see before scrolling. It provides the core information users need when viewing the page.

The page header is a pattern that helps define the uppermost part of a webpage or product. The page header pattern is a template that helps combine other components (breadcrumbs, headings, actions, and selects) to create a consistent user experience.

1

2 Breadcrumb

3 Page title

4 Primary action Secondary action ...

5 Quick filters Assignee

The standard page header contains:

1. **Grid/page:** The page or content area where the page header sits. Each page requires grid spacing to be set to account for page size and fixed/fluid pages.
2. **Breadcrumb:** Breadcrumbs are an optional secondary navigation aid that shows users their current location in relation to the rest of the site.
3. **Title:** Page title summarizes the page content. The title wraps onto multi-lines when using fluid grid alignment and is truncated when using fixed grid alignment.
4. **Buttons:** Actions modify the page and its content. Use primary, secondary, subtle, compact, or other buttons defined in the [button guidelines](#).
5. **Search bar/filter:** The search bar / filter is an optional but common pattern in products. It allows users to refine the page content on a more granular level using a search or selects.

© 2020 Atlassian Careers Trademark Privacy License



UI KITS: WHAT ARE THEY?

UI Kits are specialized design toolkits containing pre-made components, elements, and templates tailored for specific devices or platforms.

They're like a designer's ready-made arsenal, with device-specific building blocks like buttons and icons.

Why do we use them?

- To give designers a jumpstart by offering elements optimized for a particular environment
- Ensure visual harmony
- Ensure device-specific user experience consistency.
- UI Kits are your handy toolbox, customized for smoother design journeys on specific devices or platforms.

UI KITS

VS.

DESIGN SYSTEMS

- Scope: Tool kit for specific tasks; they are a ready-to-go set of visual elements
- Customization: Quick and convenient, easy customization; however, you risk the potential of a design being too generic - you trade-off between speed and uniqueness
- Applicability: go-to champions for smaller projects or when speed is needed, they are the trusty allies to get the job done in a flash

- Scope: Take a broader view, cover the visuals and underlying principles. They include guidelines and overall philosophy
- Customization: offer a more extensive toolkit, you can customize, but with a broader framework. This balance maintains consistency across the project while tailoring to needs
- Applicability: Enters in the realm of a larger project; they are a strategic foundation for projects in the long haul not a quick sprint



TRENDS IN IXD UP & COMING TO KEEP YOU IN THE LOOP...

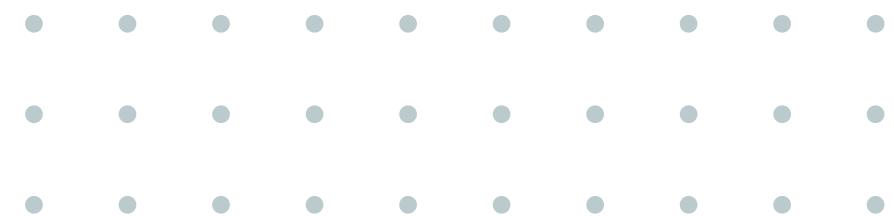
× × × ×



06

TRENDS IN IXD

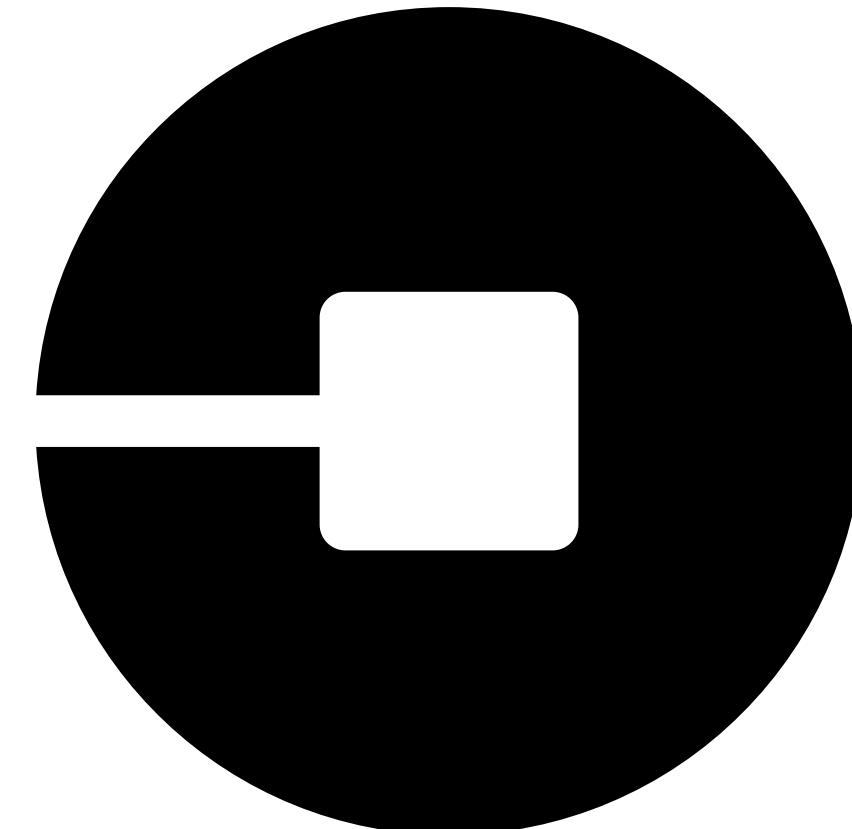
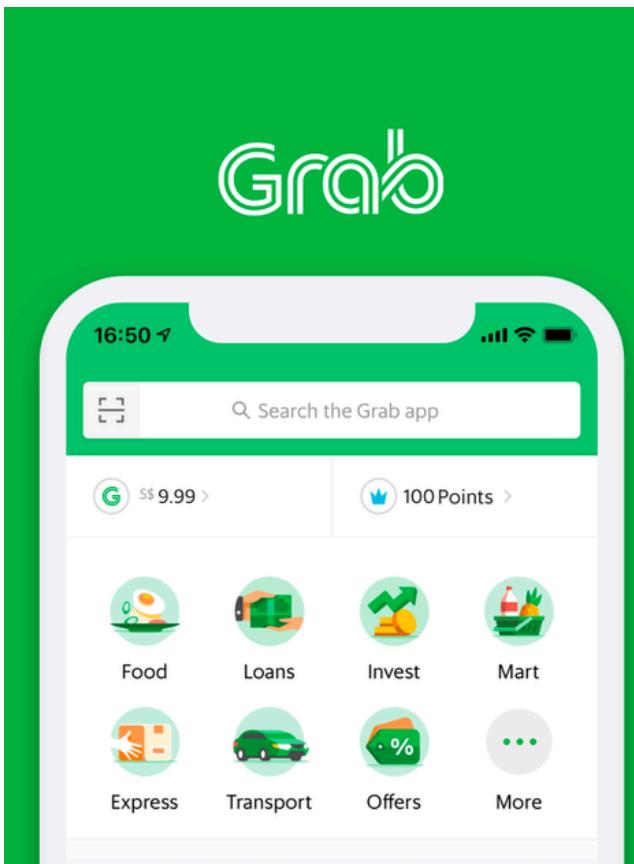
Trends in UX and IxD hold significance in the ever-evolving digital landscape. They reflect the dynamic nature of user preferences and technological advancements. Staying attuned to these trends is crucial for designers and businesses alike, as they directly impact the way users engage with products and services. By embracing current trends, designers can enhance user satisfaction, streamline usability, and foster a deeper connection between users and technology.





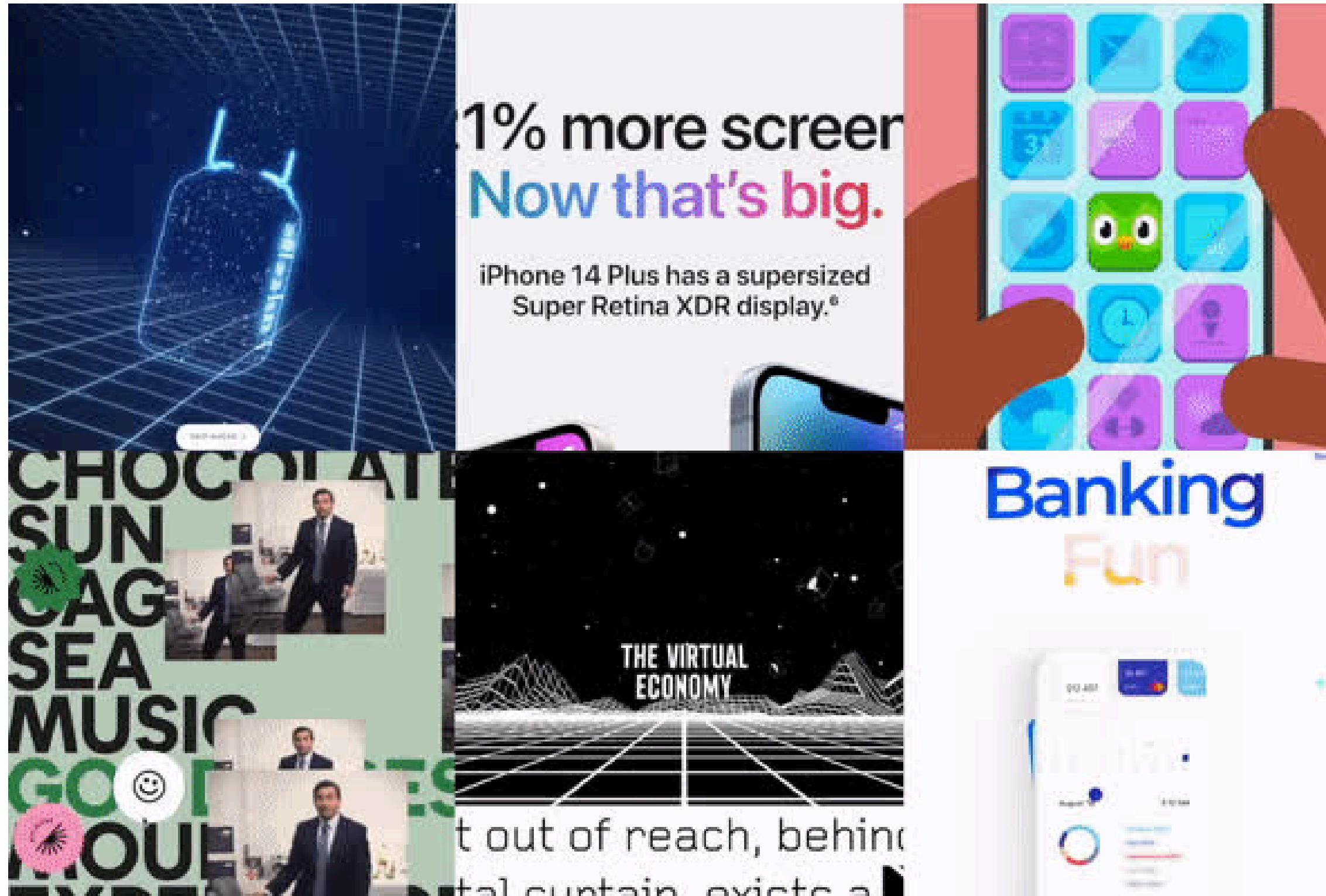
SUPER APPS

A super app is an all-in-one mobile application that provides a wide range of services and functions, allowing users to perform various tasks within the app instead of using multiple separate apps.





COMPLEX ANIMATIONS + MOTION DESIGN





CLEAN DESIGN

The collage illustrates clean design principles through six different platforms:

- Coinbase:** A landing page for "Jump start your crypto portfolio". It features a large hero image of a woman, a clear call-to-action button ("Get started"), and a sidebar showing user assets.
- Airbnb:** A promotional image for the 2022 Winter Release, featuring a central smartphone displaying a video of a woman and a circular grid of host profiles.
- Fleet:** A mobile application interface showing a news feed with cards for "our newsletter" and "Stunnin Work".
- fooh&boh:** A platform for hospitality and retail hiring, showing a mobile app interface with a "Explore & shop" feature.
- Revolut:** A mobile banking app interface with a large "One app, all things money" headline and cards for "Everyday needs" and "Spend smarter everyday".
- Mobile Application:** A mobile application interface for travel and experiences, showing a search screen for "Stay, Flights, Cars, Things to do" and a "Location" search bar.



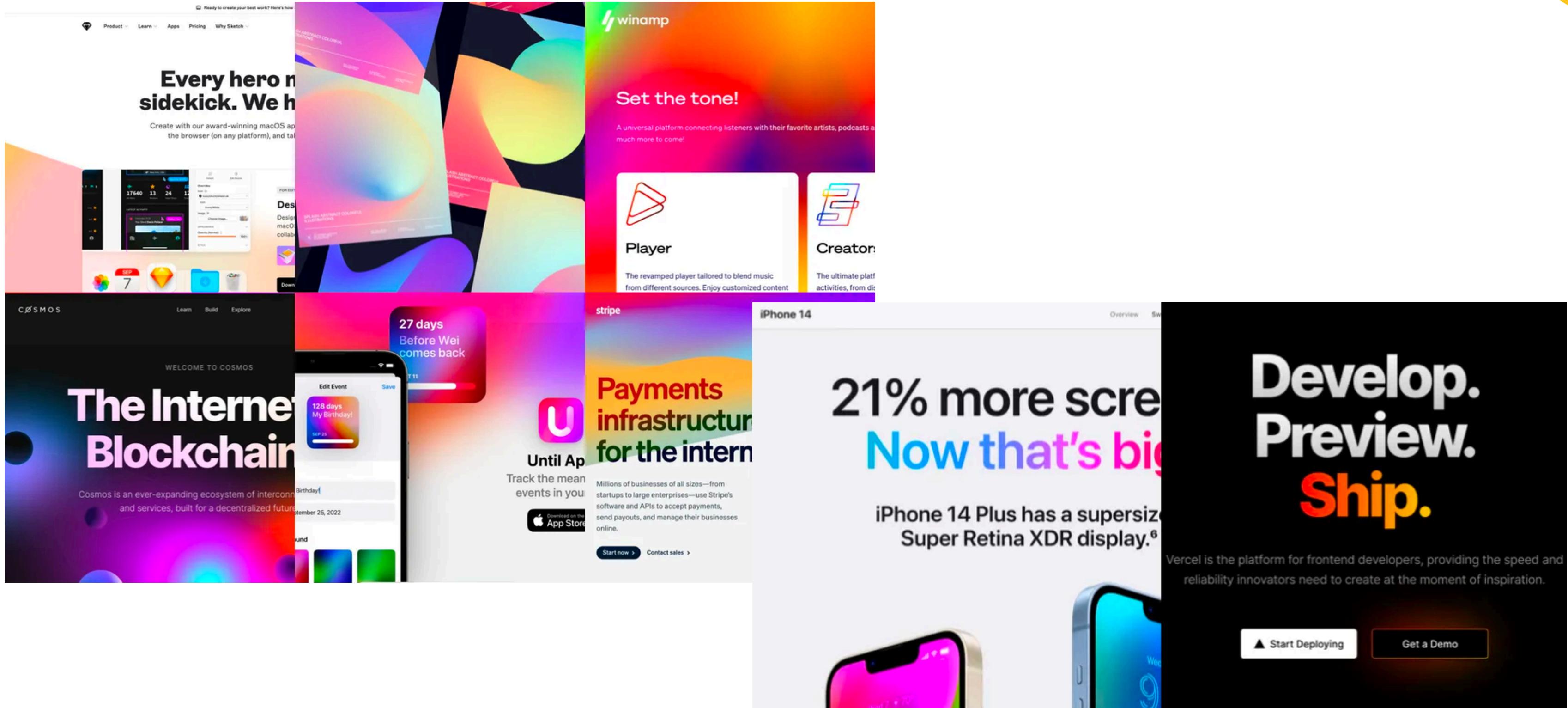
DARK VERSIONS OF DESIGN

The collage illustrates the use of dark themes in different software applications:

- Linear:** A project management tool. The top half shows a desktop interface with a dark background, featuring a code editor window and a file tree. The bottom half shows a mobile application interface with a dark background, displaying a globe icon and a message card.
- Notion AI:** An AI integration for Notion. It features a dark background with a central illustration of a person working at a laptop, surrounded by icons like a lightbulb and a pencil.
- Zenvier:** A mobile application interface. It features a dark background with three circular cards containing colorful, abstract images and text.
- Railway:** A cloud-based development platform. It has a dark background with a central call-to-action button labeled "Start a New Project".
- Notion:** A general productivity tool. It features a dark background with a large, bold headline "Introducing Notion AI" and a sub-headline "No-code video auto creation tool for".



GRADIENTS





STORYTELLING (THROUGH SCROLLING)





ADVANCED CURSOR INTERACTIONS

A screenshot of a website for Aleef Estate. The header features a yellow circular graphic on the left and four black 'X' marks on the right. The main navigation bar includes 'ALEEF ESTATE' and icons for 'GO TO PROJECTS', 'ABOUT', 'INFORMATION', and 'CONTACT'. The page title 'ALEEF ESTATE' is displayed prominently. Below the title, large text reads 'AESTHETICS', 'AMBITIONS', and 'ENERGY' stacked vertically. A subtext block states: 'CHANGE FOR THE BETTER STARTS WITH BIG DREAMS AND NEW INSPIRATIONS. WE CREATE PLACES OF POWER WHERE DREAMS AND INSPIRATIONS ARE BORN.' At the bottom, there's a photograph of a bronze statue of a man's head on a pedestal, set against a backdrop of a modern building with many windows. A small sunburst icon is located in the bottom right corner of the page area.



CROSS DEVICE EXPERIENCE

Many products will continue taking the cue throughout the coming year in making their digital products as device agnostic as possible, while also providing a consistent and reliable experience in real time.





VOICE INTERFACES

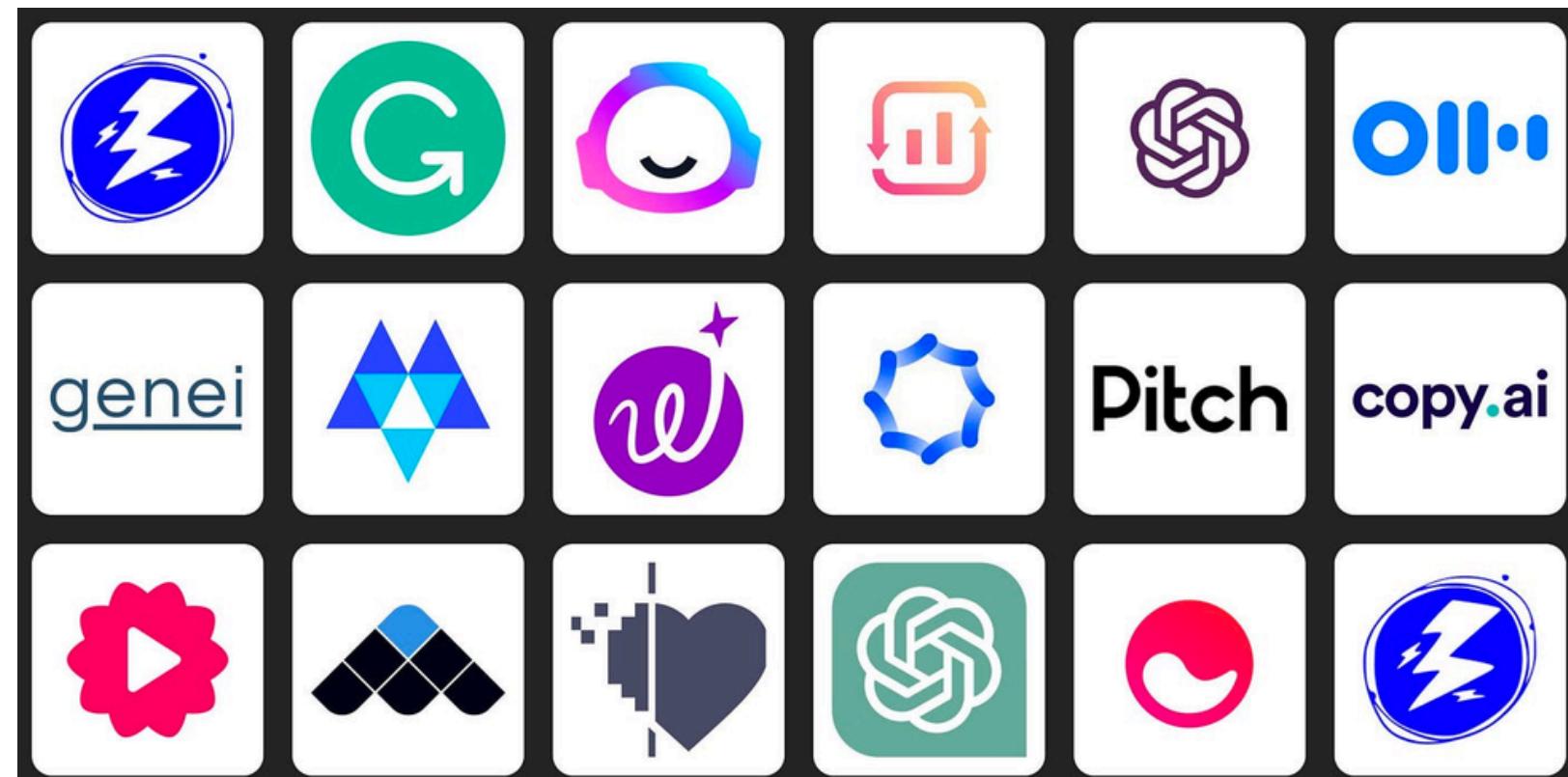
Voice user interfaces (VUIs) allow the user to interact with a system through voice or speech commands. Virtual assistants, such as Siri, Google Assistant, and Alexa, are examples of VUIs. The primary advantage of a VUI is that it allows for a hands-free, eyes-free way in which users can interact with a product while focusing their attention elsewhere.





AI INTEGRATION

Artificial intelligence, or AI, is a type of technology that helps machines think and do things just like humans. It's everywhere, from those helpful chatbots you talk to when you need assistance to those suggestions you get when shopping online based on what you've looked at before.

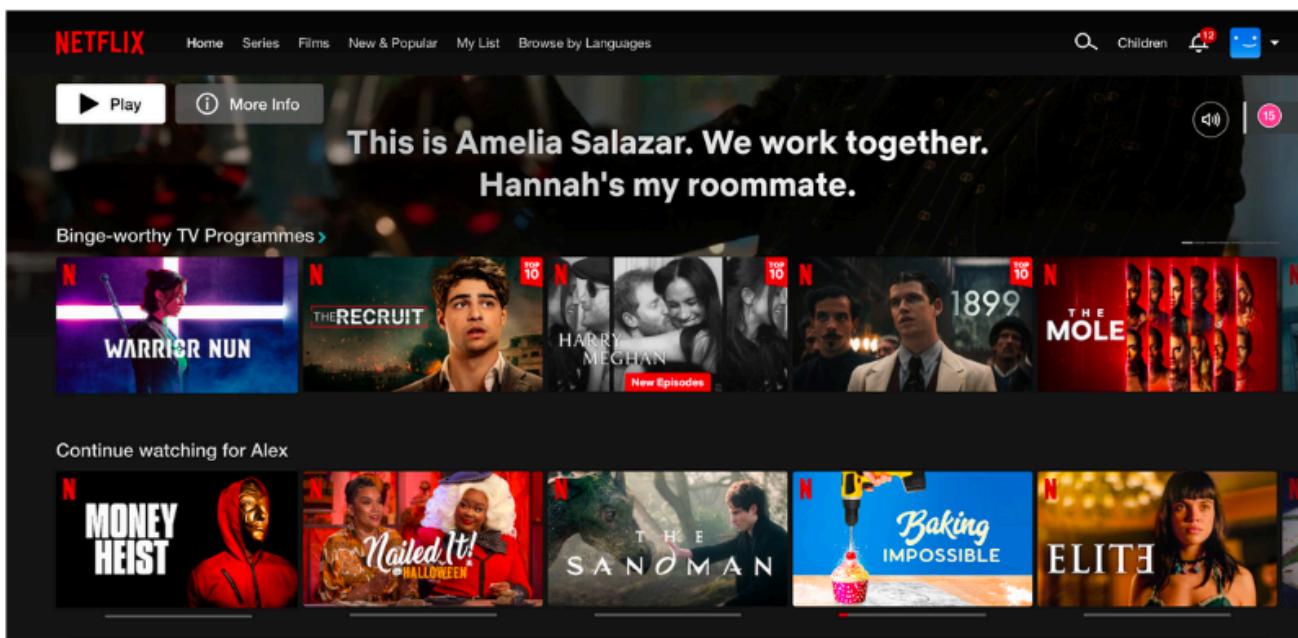




THE RISE OF PERSONALIZATION



As companies collect more data on their users, especially first-party data, we're likely to see even more personalized user experiences. As a result, UX designers should think about how to use this data effectively to create experiences that are both relevant and engaging.





MIXED REALITY (MR) OR (AR / VR)

Mixed realities are becoming increasingly popular, creating more personal and engaging experiences. Whether it is a digital overlay on the real world (AR) or being completely transported into a completely different experience (VR), both have changed how we interact with designs and objects.



TIP: When working in 3D, you work in distance rather than pixels – because UI in VR/AR floats. Out of the best comfort for your user, never place something directly center in front – rather slightly below.



UX IN VIRTUAL REALITY (VR)

The adoption of VR in digital products and services have increased the interactions possible, the best ways to unleash these potentials are by:

- Allowing User Control and Freedom
- Keeping Users at the forefront of Design
- Following the basic UX principles of hierarchy, consistency, and empathy
- More guiding along the way approach to provide comfort
- Use natural actions for hand gestures
- Avoid Abrupt changes
- Heavier focus on Audio Elements
- Give attention to Aesthetics

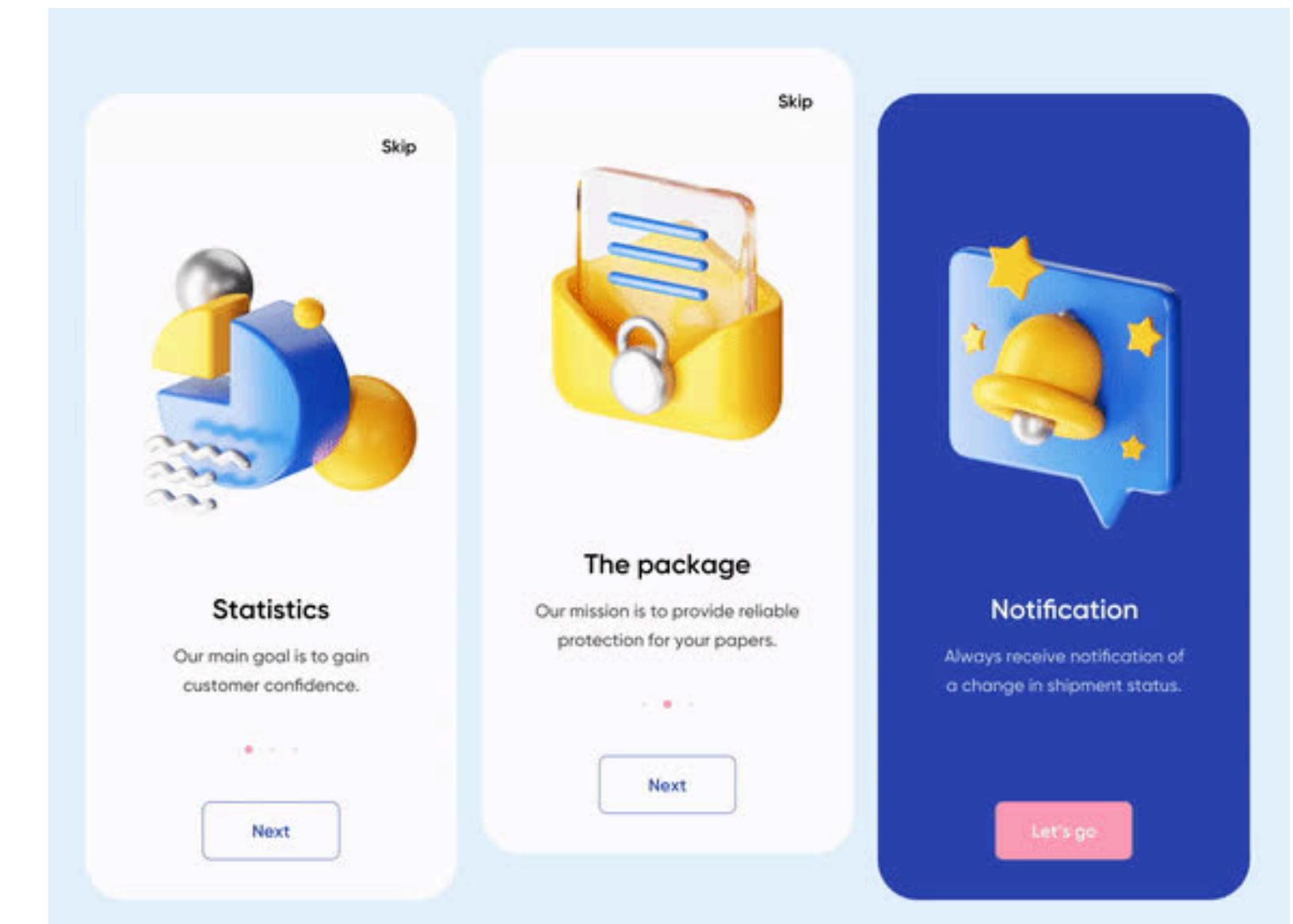
Good place to start:
<https://www.ramotion.com/blog/vr-in-ux-design/>



3D & ANIMATED VISUAL ELEMENTS

Involving 3D and animated visual elements has gained significant traction in recent years, transforming digital experiences. Designers are increasingly integrating these elements to enhance engagement and interactivity.

3D graphics and animations add depth, realism, and immersion to websites and applications, making them more visually appealing and memorable.





BRUTALISM

This trend is described as raw, minimal style of design that embraces functionality over form and aesthetics. Characteristically these designs are extremely simplistic and minimal in their layout and designs.

Key Features: repetitive geometrical patterns, bold, eye-catching visuals, clashing colour palettes, Open Navigation, Raw/Upholished Designs, Honest and transparent.





SUSTAINABILITY IN UX

Green UX Checklist

1 Reduce Images

Reduce image quantity, resolution, and quality as much as possible without hurting the user experience. Serve multiple images based on device size for even greater savings.

2 Optimize Videos

Make sure your videos are as brief, low resolution, and compressed as possible. Also consider disabling autoplay so you're not wasting bandwidth on uninterested users.

3 Use Fewer Fonts

Reduce the number of webfonts used in your project. It's surprising how quickly the KB start to pile up when using large families or too many fonts.

4 Recycle Assets

You can use CSS3 filters and overlay techniques to reuse assets in different ways. On our Serving.Green site, we used the same video in full colour, monotone and black and white!

5 Use Green Hosting

Switch to a green host that's powered by sustainable energy sources like geothermal or hydroelectric power. Visit The Green Web Foundation to find a green host near you.

6 Use Optimization Tools

Tools like Google PageSpeed Insights and Pingdom Website Speed Test can offer insights into other ways to optimize your resources, and page performance.