



Visual Design and Fluid Navigation

Human Computer Interaction

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Academic Year 2019/2020



POLITECNICO
DI TORINO



Visual Design

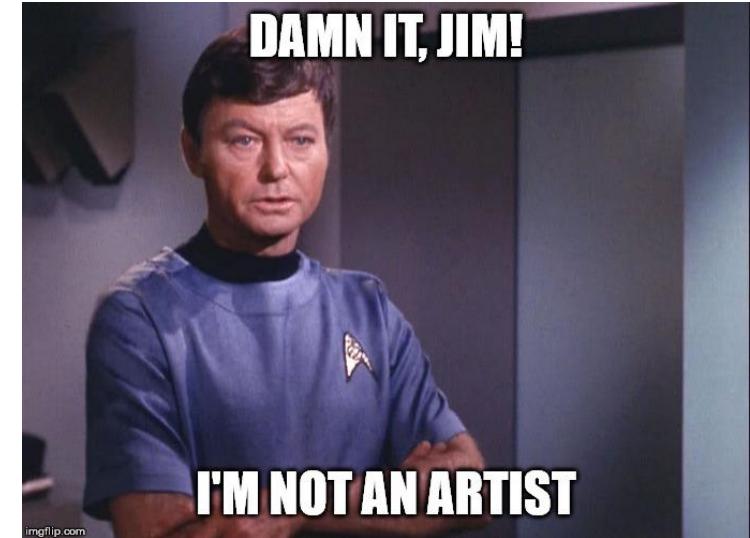
Aesthetics for helping users in understanding and navigating the UI

Visual Design

- **Guiding:** conveying structure, relative importance, relationships
- **Pacing:** drawing people into your app, orienting them, and showing where to go, providing hooks to dive deeper
- **Messaging:** expressing meaning and style, breathing life into your content
- Both at the conscious and sub-conscious levels
- And also...
 - Making everything look aesthetically beautiful
 - (but this is not the goal)

Visual Design vs. Art and Artistic Skills

- A.k.a. «Help, I'm not an artist!»
- Artistic skills help a bit but are neither necessary nor sufficient
- Art does not need to be practical; design does
- Real design skills take years to master
- Widely-accepted heuristics are a good and easy start



The Basics of Visual Design

Basic visual design involves text, layout, and colors. First let's start with text. Gracefully using whitespace helps separate out logical chunks of content. Next, font size and style differences convey hierarchy. Finally, alignment is crucial for helping readers scan quickly.

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The Basics of Visual Design

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Layout

Colors

The Basics of Visual Design

BASIC VISUAL DESIGN

Text

- **Whitespace**: helps separate out logical chunks of content
- **Font**: size and style differences convey hierarchy
- **Alignment**: crucial for helping readers scan quickly

Layout

Colors

Recognizable page structure

The screenshot displays the homepage of the Italian newspaper **LA STAMPA**. The top navigation bar includes links for **GNN**, **NEWSLETTER**, and social media icons for **TWITTER** and **FACEBOOK**. On the right, there are buttons for **ABBONATI** and **ACCEDI**. The main title **LA STAMPA** is centered above a menu bar with options **MENU**, **LEGGI IL QUOTIDIANO**, **TOP NEWS**, and **TUTTOLIBRI**. A search icon is also present. Below the menu, the date **Aggiornato alle 22:45 - 04 novembre** is shown, along with navigation links for **La caduta del Muro**, **Serie A**, **Siria**, **Manovra**, **TORINO**, and **EDIZIONI LOCALI**.

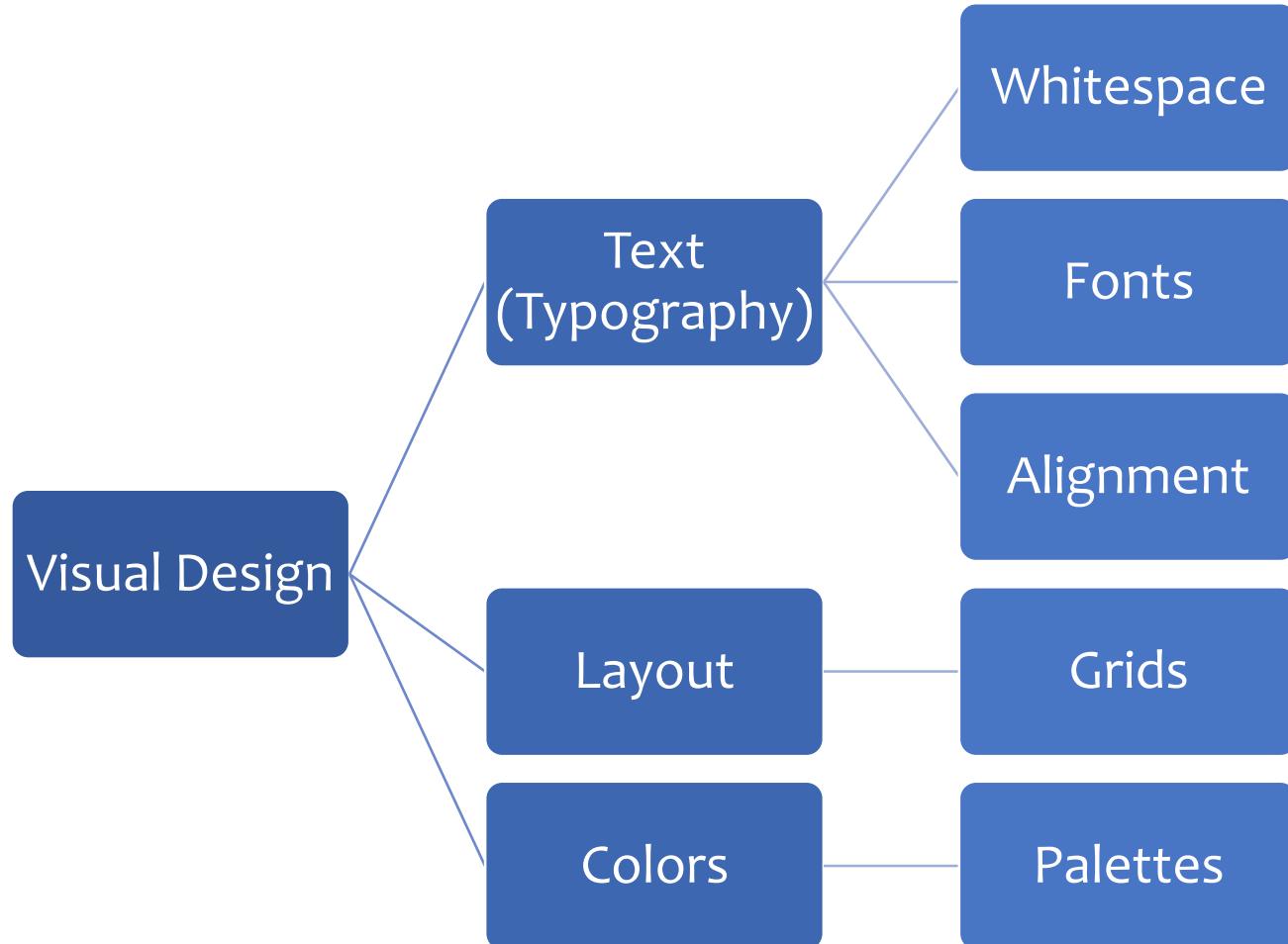
The main content area features several news cards:

- I demoni di Hamilton: "Non è facile come sembra, per me è durissima"** by STEFANO MANCINI
- Lavorare meno per rendere di più: la ricetta funziona davvero** by EMANUELA GRIGLIE
- Reportage Trombe d'aria, pioggia e fiumi esondati: in Liguria torna l'incubo alluvione** by MARCO MENDUNI
- ArcelorMittal abbandona Taranto e l'ex Ilva. Scoppia la polemica. L'azienda: c'era il diritto di recesso** by PAOLO BARONI. This card includes a thumbnail image of an ArcelorMittal sign.
- Intervista - Calenda: sull'Ilva di Taranto distrutto il lavoro di anni** by PAOLO BARONI. This card includes a thumbnail image of a man speaking.
- ArcelorMittal si tira indietro sull'Ex Ilva, ecco quanto pesa la decisione su Taranto** by GIULIA CIANCAGLINI. This card includes a thumbnail image of an industrial facility.
- La storia dell'acciaieria più grande d'Europa. Ecco l'Ilva dal 2012 a oggi** by GIULIA CIANCAGLINI. This card includes a thumbnail image of an industrial facility.
- Il surriscaldamento climatico è arrivato nel profondo delle Alpi** by NICOLA PINNA. This card includes a thumbnail image of a person working in a snowy environment.
- LA STORIA DI GIOVANNI BELZONI IN UN LIBRO** by MARCO ZATTERIN. This card includes a thumbnail image of a man's face.
- Da Abu Simbel a Giza, l'italiano che inventò l'egittologia** by MARCO ZATTERIN. This card includes a thumbnail image of a man's face.
- SECONDO NOI** by MARCO SODANO. This card includes a thumbnail image of a group of people.
- Sud svuotato e senza lavoro: lo Svimez lancia l'allarme recessione** by MARCO SODANO. This card includes a thumbnail image of a document or chart.

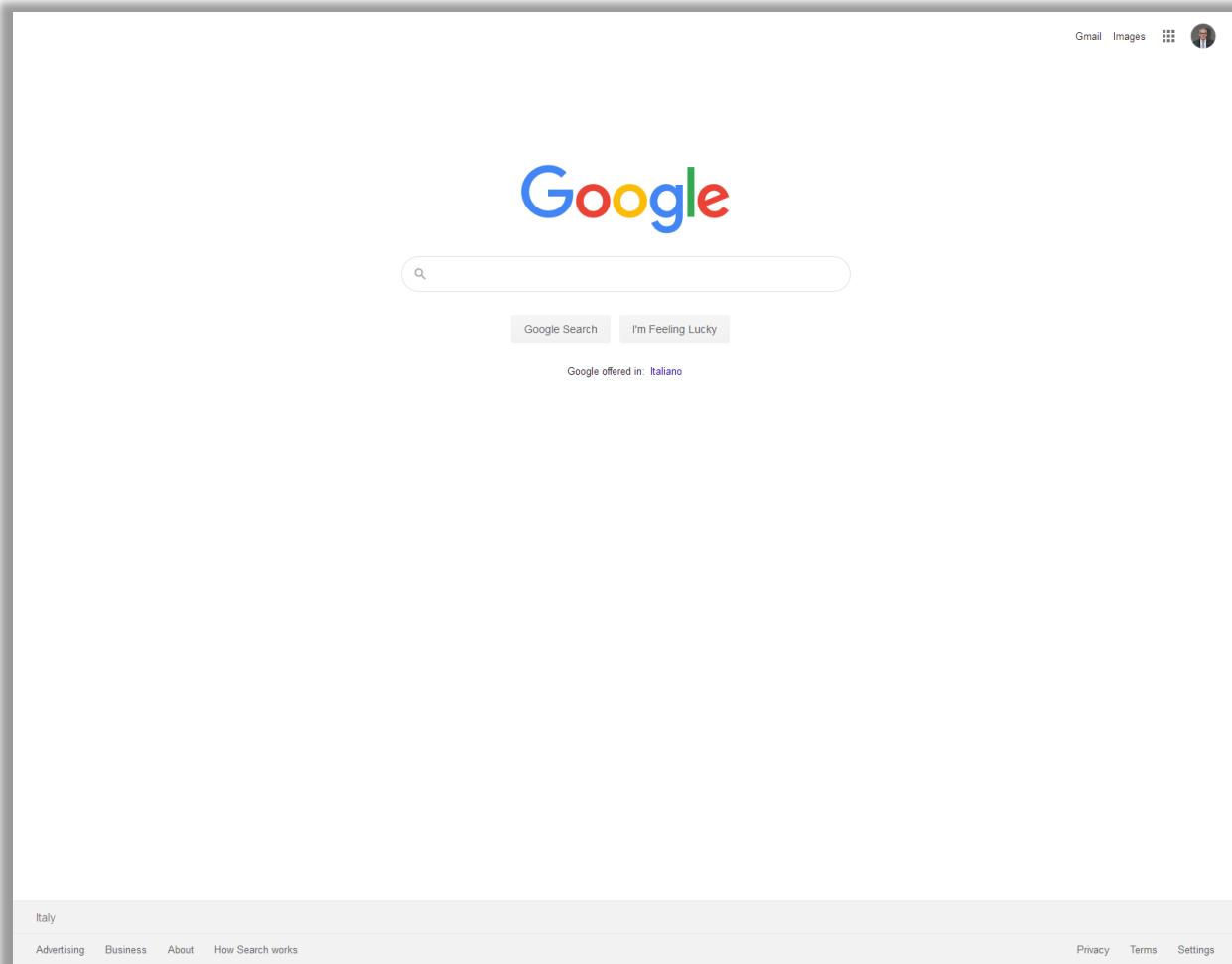
Recognizable page structure



Key ingredients



Recognizable page structure



Recognizable page structure



Recognizable page structure

The screenshot shows the Stack Overflow homepage with the 'Top Questions' section highlighted. The page has a clean, modern design with a white background and a light gray header bar.

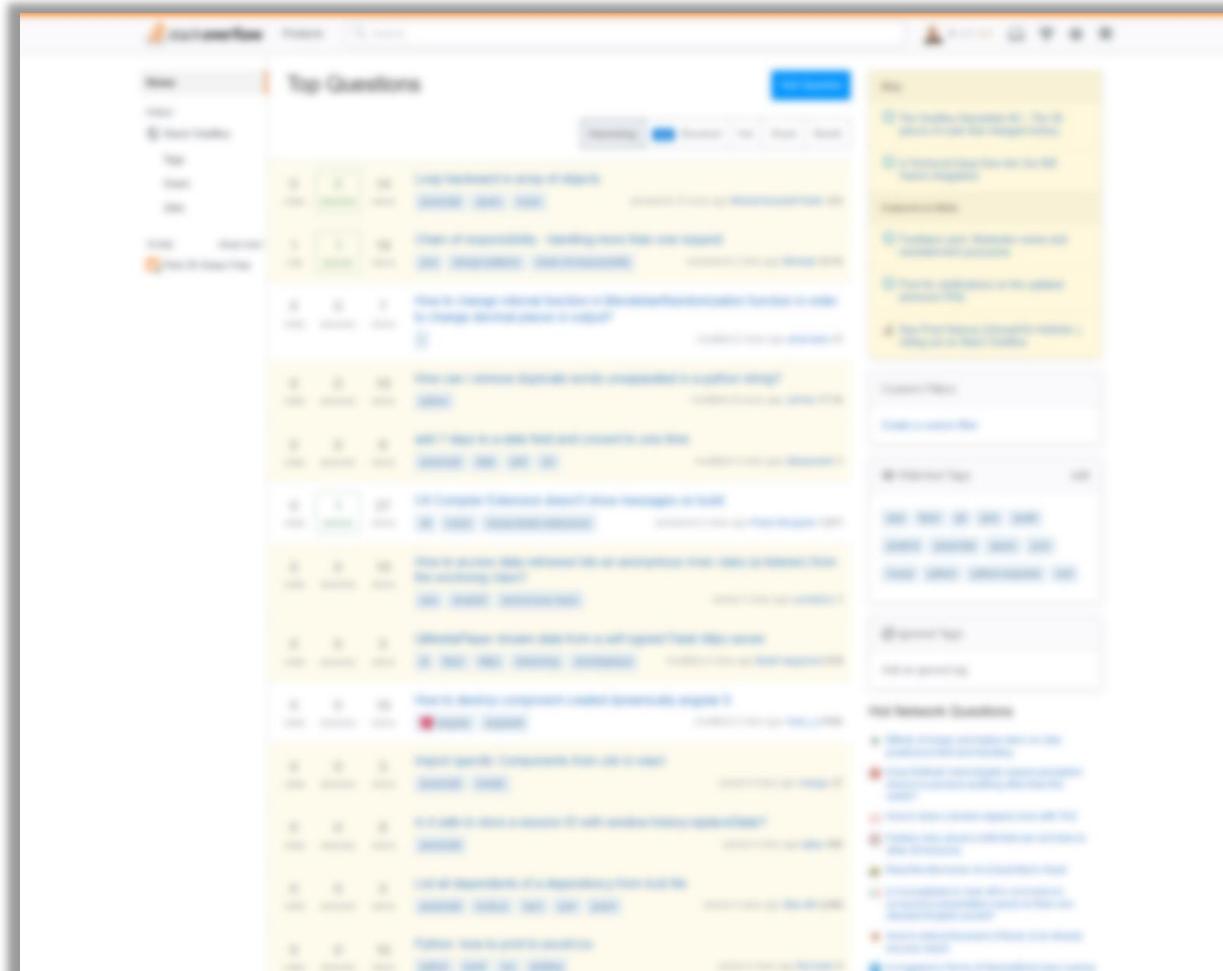
Header: The top navigation bar includes the Stack Overflow logo, a 'Products' dropdown, a search bar with placeholder text 'Search...', and user account information.

Sidebar: On the left, there's a sidebar with links for 'Home', 'PUBLIC' (Stack Overflow), 'Tags', 'Users', 'Jobs', 'TEAMS' (with a note 'First 25 Users Free'), and 'What's this?'. There's also a small orange icon for Teams.

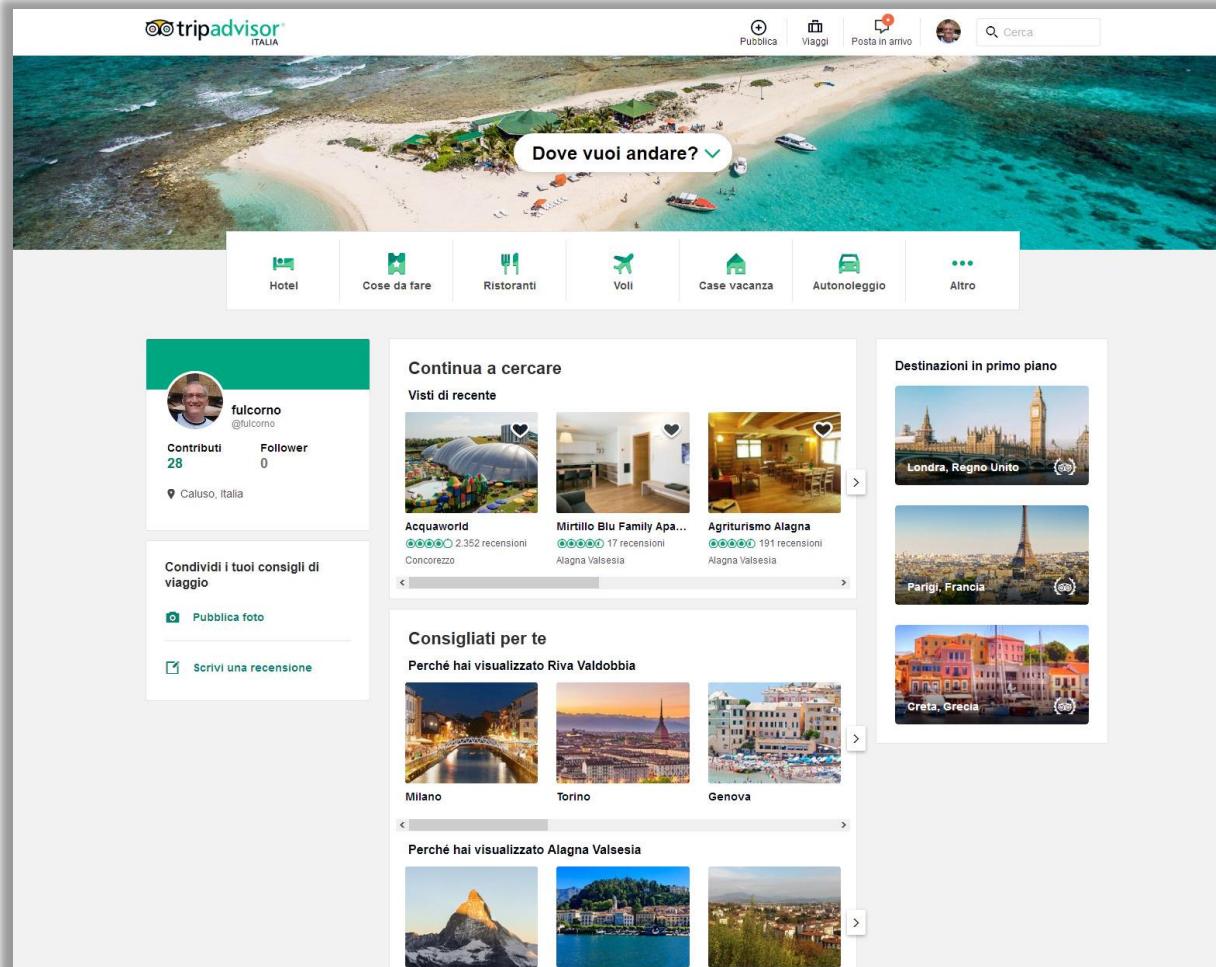
Main Content: The central area features a large title 'Top Questions' with a blue 'Ask Question' button. Below it is a grid of 15 question cards, each with a thumbnail, title, vote count, answer count, view count, tags, and a timestamp. For example, the first question is 'Loop backward in array of objects' with 2 answers and 14 views.

Right Sidebar: This sidebar contains several sections: 'Blog' (with links to newsletter articles), 'Featured on Meta' (with a link to feedback posts), 'Custom Filters' (with a 'Create a custom filter' button), 'Watched Tags' (listing 'ajax', 'flask', 'git', 'java', 'javafx', 'javafx-8', 'javascript', 'jquery', 'json', 'mysql', 'python', 'python-requests', and 'rest'), and 'Ignored Tags' (with a 'Add an ignored tag' button). At the bottom of the sidebar is a section titled 'Hot Network Questions' featuring a list of questions from other Stack Exchange sites.

Recognizable page structure



Recognizable page structure



Recognizable page structure



‘Gestalt’ principles

Hints from the psychology of Shapes and of Representation

Gestalt principles

- Laws from 1920s' psychology: how humans typically see objects by grouping similar elements, recognizing patterns and simplifying complex images
- Designers use these to engage users via powerful -yet natural- “tricks” of perspective and best practice design standards
- “*The whole is other than the sum of the parts*” - Kurt Koffka



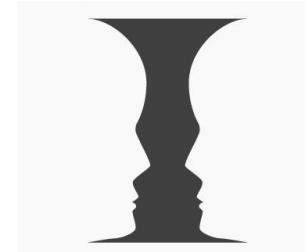
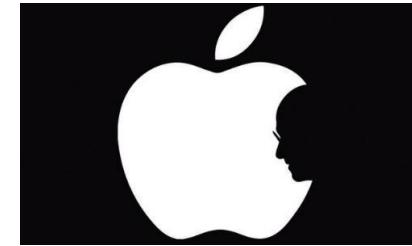
<https://www.interaction-design.org/literature/topics/gestalt-principles>

<https://www.usertesting.com/blog/gestalt-principles/>

Some Gestalt principles

- **Figure/Ground:** Disliking uncertainty, we look for solid, stable items. Foreground catches the eye first
- **Closure:** Preferring complete shapes, we automatically fill in gaps to perceive a complete image; we see the whole first
- **Common Region:** We group elements that are in the same closed region
- **Element Connectedness:** We group elements linked by other elements
- **Continuation:** We follow and “flow with” lines
- **Proximity (Emergence):** We group closer-together elements, separating them from those farther apart.
- **Good Form:** We differentiate elements that are similar in color, form, pattern, etc. and cluster them together
- **Meaningfulness (Familiarity):** We group elements if they form a meaningful or personally relevant image.
- **Prägnanz:** We perceive complex images as simple ones.
- **Convexity:** We perceive convex shapes ahead of concave ones
- **Regularity:** Sorting items, we tend to group some into larger shapes, and connect elements that form a pattern.
- **Similarity (Invariance):** We seek differences and similarities in an image and link similar elements.
- **Symmetry:** We seek balance and order in designs, struggling to do so if they aren’t readily apparent.
- **Common Fate:** We group elements that move in the same direction
- **Synchrony:** We group static visual elements that appear at the same time.

Examples: figure-ground



Basecamp 3

Version 3 is all new for 2010!

Working with other people? Struggling to keep everyone on the same page?

DID WE GET THAT DRAFT YET?
WHEN IS THIS DUE?
NO ONE TOLD ME THAT!
WAIT, WHO MADE THAT DECISION?
WHERE DO I PUT THAT?
WHO SENT THIS TO THE CLIENT?
THIS IS EXHAUSTING!

Sign up now for free below
Just last week, 10,772 companies got started with Basecamp 3!

Sign up using Google

Or, sign up with your email

Your Name: Julie Appleseed

Your Email: julie@widgetco.com

Company/Organization: Widget, Co.

SYNDICATES STARTUPS FUNDS STARTUP JOBS RECRUITING MORE

SEARCH

Join Log In

Find a Startup Job

Post a Job

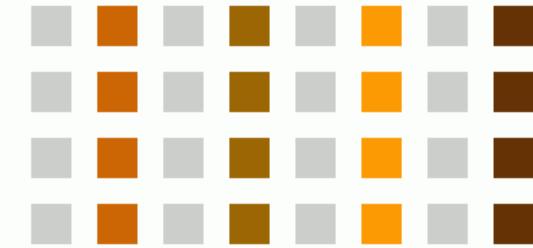
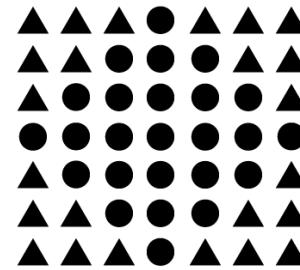
Raise Money Online

Invest in Startups

AngelList

Where the world meets startups

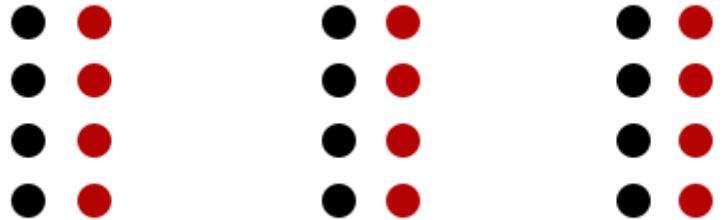
Examples: similarity



The GitHub sign-up page features a dark background with white text and light blue highlights. At the top, there's a navigation bar with links for "Explore", "Features", "Enterprise", "Pricing", "Sign up", and "Sign in". The main heading "Where software is built" is prominently displayed. Below it, a sub-headline reads "Powerful collaboration, code review, and code management for open source and private projects. Public projects are always free." A note indicates "Private plans start at \$7/mo." A large green "Sign up for GitHub" button is centered. To its left, there are three input fields: "Pick a username", "Your email", and "Create a password", each with a small placeholder text below it. A note below the fields specifies character requirements: "Use at least one lowercase letter, one number, and seven characters." A terms and conditions link is also present. The bottom of the page has a blue footer bar with the text "Want to use GitHub on your servers?"

The LA STAMPA news website homepage features a clean design with a white header containing links for "GNN", "NEWSLETTER", and social media icons. The main title "LA STAMPA" is in large, bold, black letters. Below the header, a navigation bar includes "MENU", "LEGGI IL QUOTIDIANO", "TOP NEWS", "TUTTOLIBRI", and "TORINO EDIZIONI LOCALI". The main content area displays a grid of news articles. The first article, by STEFANO MANCINI, is titled "I demoni di Hamilton: "Non è facile come sembra, per me è durissima"" and includes a photo of a presentation screen with the ArcelorMittal logo. The second article, by EMANUELA GRIGLIE, is titled "Lavorare meno per rendere di più: la ricetta funziona davvero" and features a photo of Abu Simbel. The third article, by MARCO MENDUNI, is titled "Reportage Trombe d'aria, pioggia e fiumi esondati: in Liguria torna l'incubo alluvione" and includes a photo of industrial structures. Other visible articles include "ArcelorMittal abbandona Taranto e l'ex Ilva. Scoppia la polemica. L'azienda: c'era il diritto di recesso", "Intervista - Calenda: sull'Ilva di Taranto distrutto il lavoro di anni!", "ArcelorMittal si tira indietro sull'Ex Ilva, ecco quanto pesa la decisione su Taranto", "La storia dell'acciaieria più grande d'Europa. Ecco l'Ilva dal 2012 a oggi", "Il surriscaldamento climatico è arrivato nel profondo delle Alpi", and "SECONDO NOI Sud svuotato e senza lavoro: lo Svimez lancia l'allarme recessione". Each article includes a thumbnail image, a video play button, and the author's name.

Examples: proximity



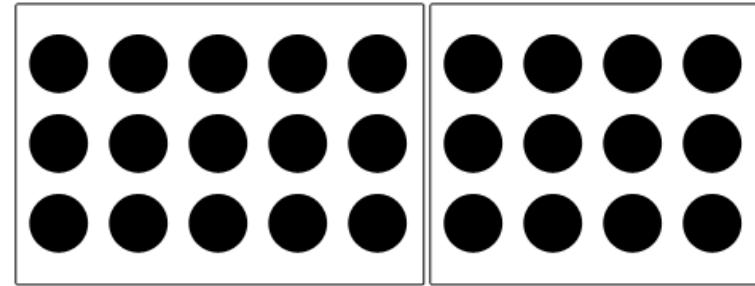
A screenshot of the Walmart website homepage. At the top, there's a navigation bar with the Walmart logo, a search bar, and account information. Below it, a banner says "Save big in every department". The main content area features a grid of product categories: Electronics (iPad), Home (blender), Exercise & Fitness (woman on treadmill), Health (vitamin bottle), Clothing & Jewelry (pink top), Furniture (blue armchair); Cold Weather Prep (person in snow), Tax Preparation (TurboTax logo), Auto & Tires (tire), Office Supplies (black bin), Home Improvement (drill), Outdoor Sports (tent); and a Paw Patrol character, a baby in a crib, a baby's face, a blue square, a bag of Tostitos chips, and a Call of Duty game cover.

A screenshot of the VICE news website homepage. The top navigation includes "WATCH", "SECTIONS", "PHOTOS", "MAGAZINE", "TOPICS", "CITY GUIDES", "ELECTION 2016", "OPINION", and "MORE". Below the navigation, there are several news cards: one about medical marijuana users in Canada, another about women who love Ted Cruz, and one about Donald Trump winning Nevada's Cliven Bundy vote. There are also sections for "STUFF" and "MOTHERBOARD".



<https://www.usertesting.com/blog/gestalt-principles/>

Examples: common region



A screenshot of a Pinterest search results page for the term "architecture". The results are displayed in a grid format with several pins visible. One pin shows a circular window in a wooden sauna, another shows a modern house with a green wall, and others show various architectural projects like a spiral staircase and a spa.

A screenshot of a Houzz article titled "11 Things You Didn't Think You Could Fit Into a Small Bedroom". The article features a small image of a bedroom and a brief description: "Clever designers have found ways to fit storage, murals and even chandeliers into these tight sleeping spaces". Below the article is a "Like" button with 157 likes, a "Comment" section with 33 shares, and a "Share" button. There are also comments from users "Frankie Sez" and "Country Mountain Homes". At the bottom, there is a link to "View 2 more comments".



Examples: continuity

Customers Who Bought This Item Also Bought

The screenshot shows a grid of book covers and their details. The books are:

- CROSSING THE CHASM, 3rd Edition: Marketing and Selling Disruptive Products by Geoffrey A. Moore
- THE LEAN STARTUP by ERIC RIES
- THE INNOVATOR'S DILEMMA by Clayton M. Christensen
- THE INNOVATOR'S SOLUTION by Clayton M. Christensen
- HOW WILL YOU MEASURE YOUR LIFE? by Clayton M. Christensen

Each book entry includes the title, author, description, rating (e.g., ★★★★☆ 72), format (e.g., Paperback), price (e.g., \$12.35), and a Prime logo.

Page 1 of 20



Step 1

Choose your meals, drinks and treats from our daily rotating menu.



Step 2

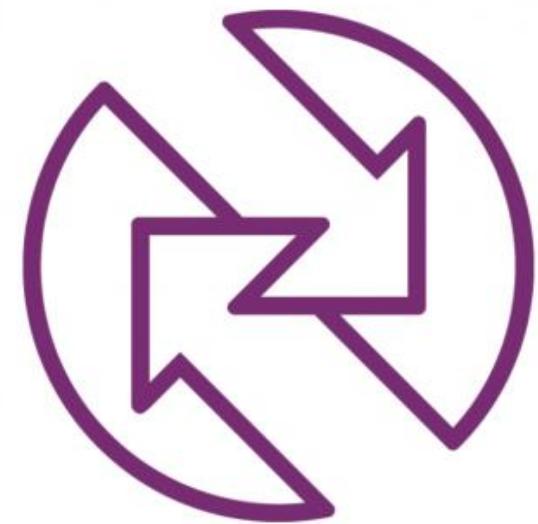
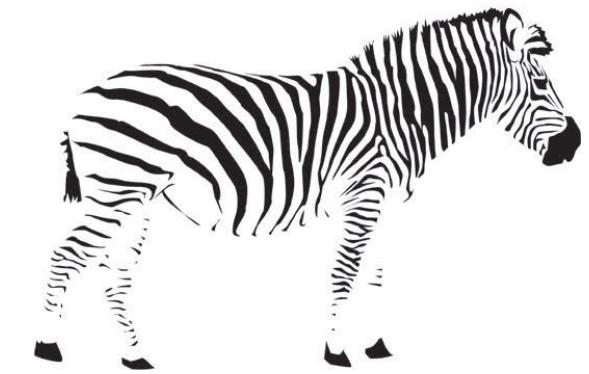
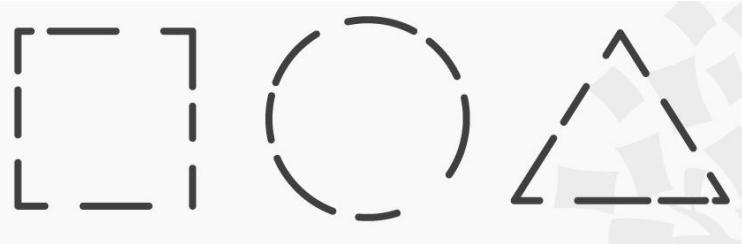
Our friendly servers organize your food for delivery - hot and ready to eat!



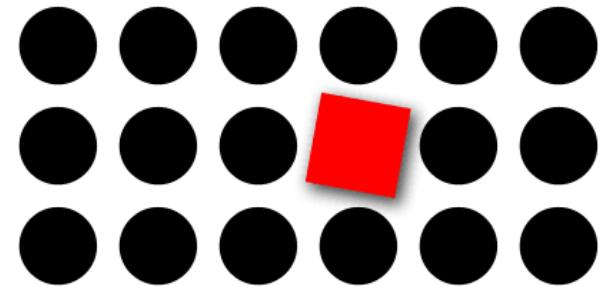
Step 3

Your meal arrives in around 20 minutes - like a home-cooked meal without the effort!

Examples: closure



Examples: focal point



The Twilio homepage features a dark background image of a busy street scene. At the top, the Twilio logo is on the left, followed by navigation links: PRODUCTS & PRICING, USE CASES, API & DOCS, NOT A DEVELOPER?, SIGN UP, and LOG IN. Below the navigation, the main headline reads "BUILD APPS THAT COMMUNICATE WITH EVERYONE IN THE WORLD". A sub-headline below it says "A Messaging, Voice, Video and Authentication API for every application". At the bottom, there are two buttons: "See Use Cases" and "Get a free API key".

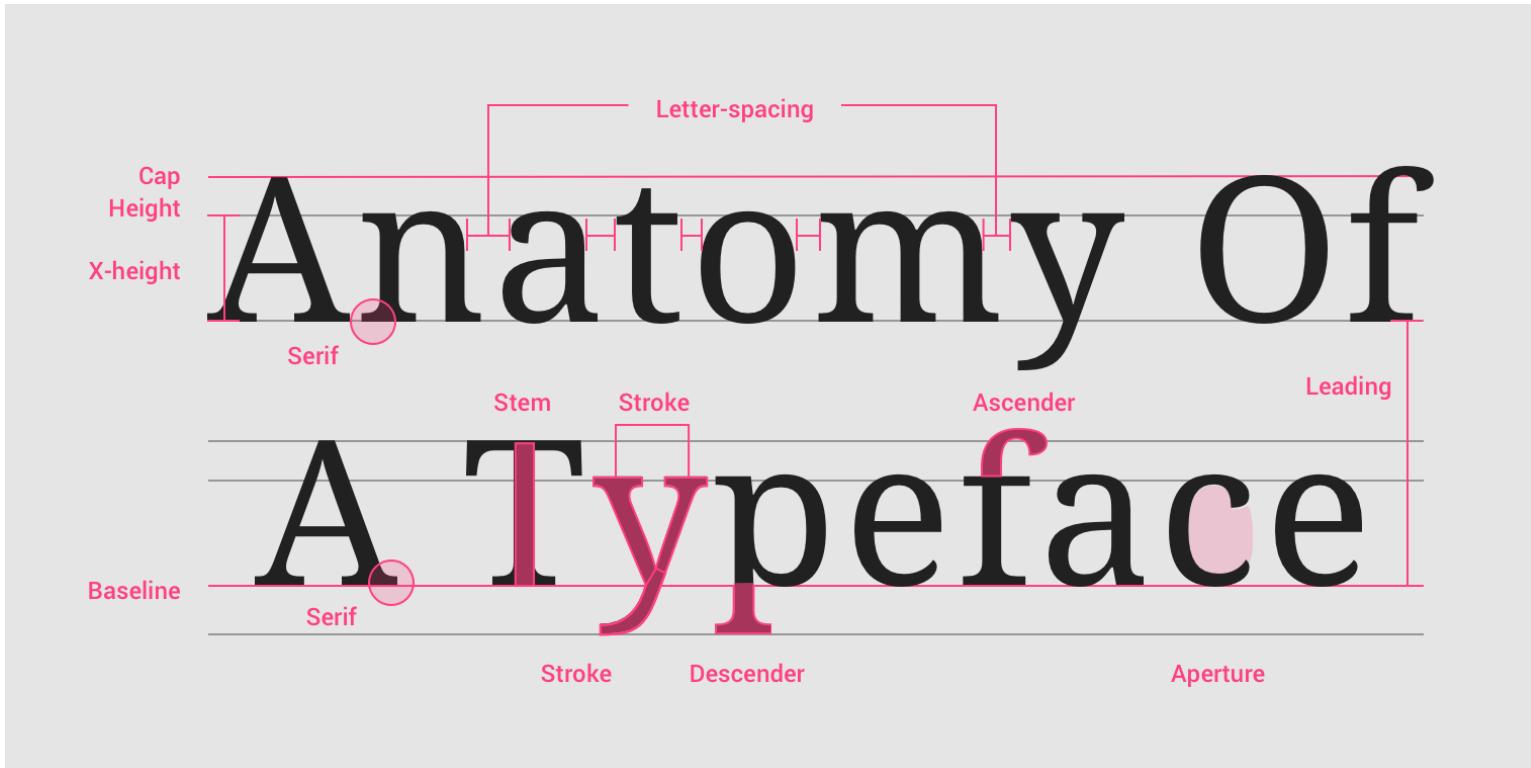
The Instacart homepage features a dark background image of a person holding a grocery bag filled with groceries. Overlaid on this image is a white rectangular form. The Instacart logo is at the top. Below it, the text "Groceries delivered in 1 hour" and "Enter your zip code to see your local stores" is displayed. There is a text input field labeled "Enter Zip Code" and a green button labeled "Find Stores". Below the button, a link says "Already have an account? Log In". At the bottom of the form, there is a small icon and the text "FREE delivery on your first order*".

Typography

Property of text

Characteristics of text

- Point Size
- Leading
- Cap Height, x-height
- Ascenders, Descenders
- Weight
- Serifs



<https://material.io/design/typography/understanding-typography.html>

Example: Material Design type scale

A combination of 13 styles that are supported by the type system

Reusable categories of text, each with an intended application and meaning

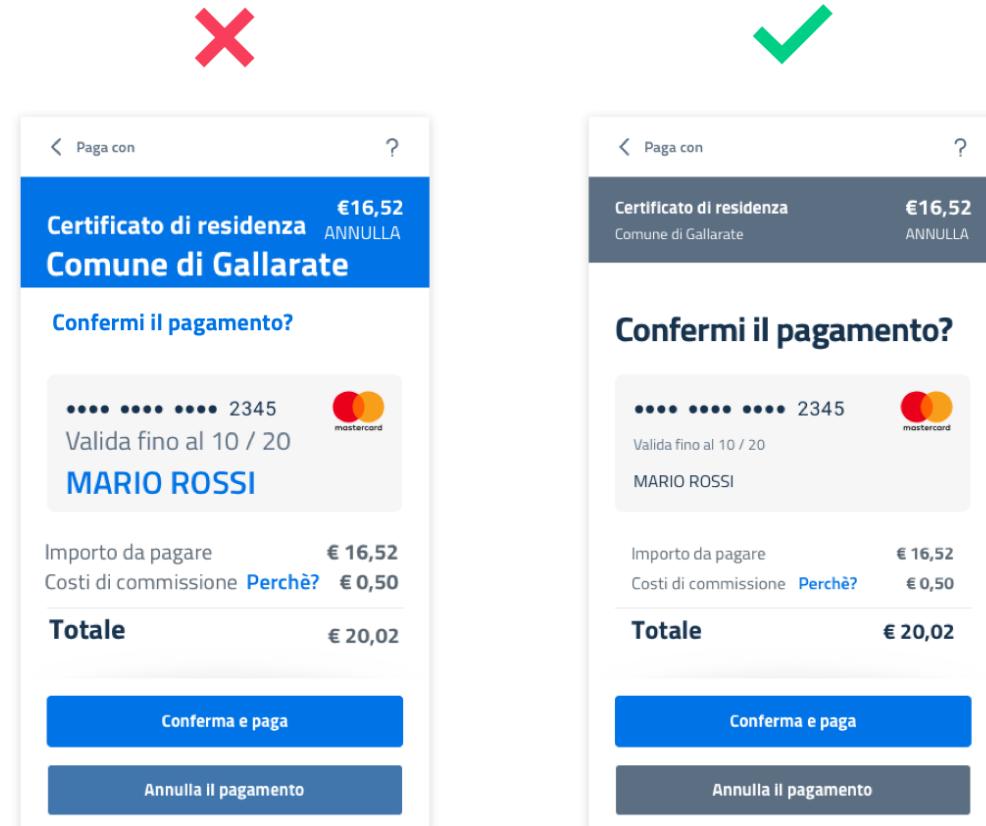
Scale Category	Typeface	Font	Size	Case	Letter spacing
H1	Roboto	Light	96	Sentence	-1.5
H2	Roboto	Light	60	Sentence	-0.5
H3	Roboto	Regular	48	Sentence	0
H4	Roboto	Regular	34	Sentence	0.25
H5	Roboto	Regular	24	Sentence	0
H6	Roboto	Medium	20	Sentence	0.15
Subtitle 1	Roboto	Regular	16	Sentence	0.15
Subtitle 2	Roboto	Medium	14	Sentence	0.1
Body 1	Roboto	Regular	16	Sentence	0.5
Body 2	Roboto	Regular	14	Sentence	0.25
BUTTON	Roboto	Medium	14	All caps	1.25
Caption	Roboto	Regular	12	Sentence	0.4
OVERLINE	Roboto	Regular	10	All caps	1.5

<https://material.io/design/typography/the-type-system.html#type-scale>

Example: Text conveys hierarchy

Font size, color and spacing define a hierarchy of visibility and attention

The visual hierarchy should match the relative importance of the information content



<https://docs.italia.it/italia/designers-italia/design-linee-guida-docs/it/stabile/doc/user-interface/il-disegno-di-un-interfaccia-e-lo-ui-kit.html>

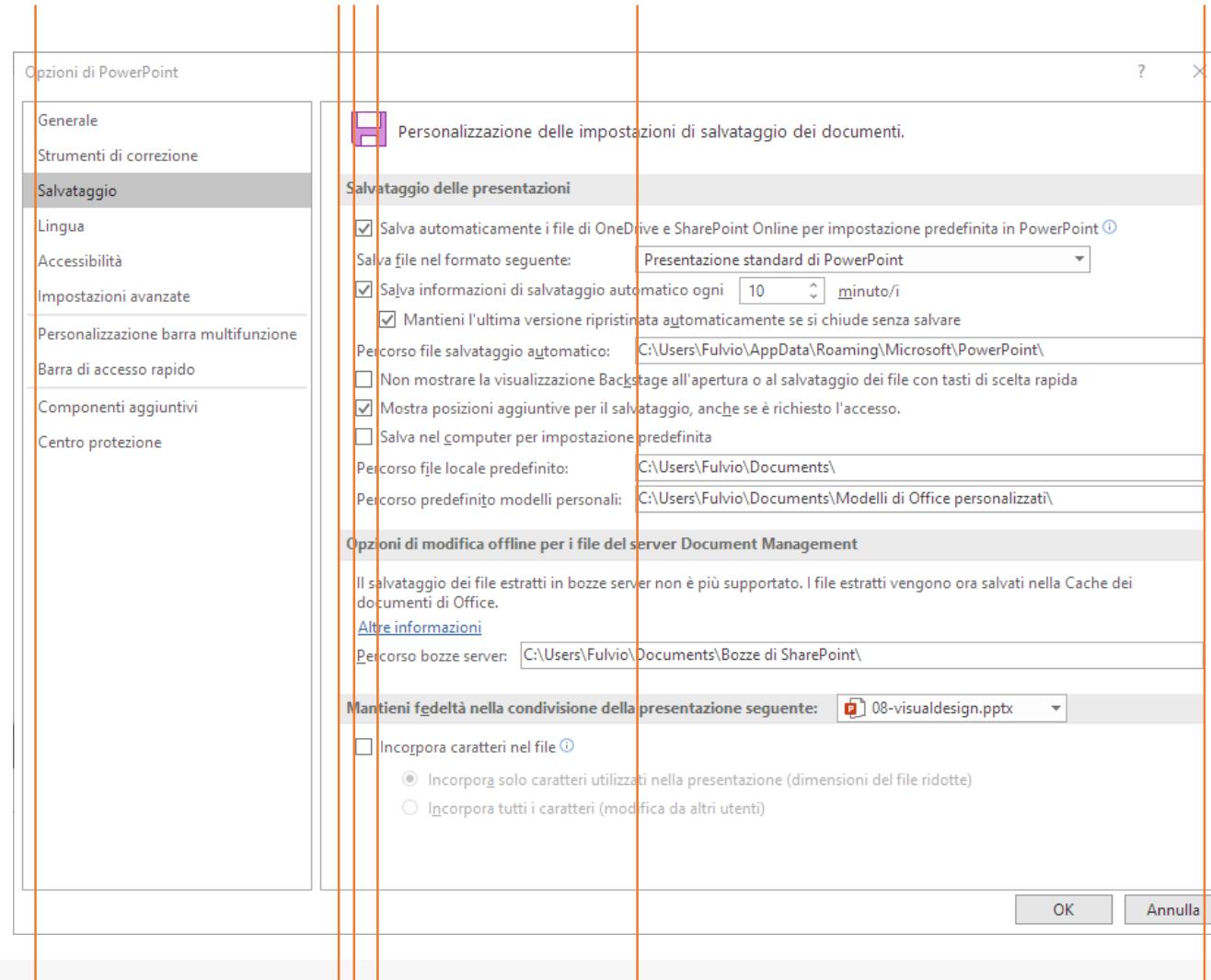
Grids and Alignment

Exploiting grouping and alignment to convey content, at different levels

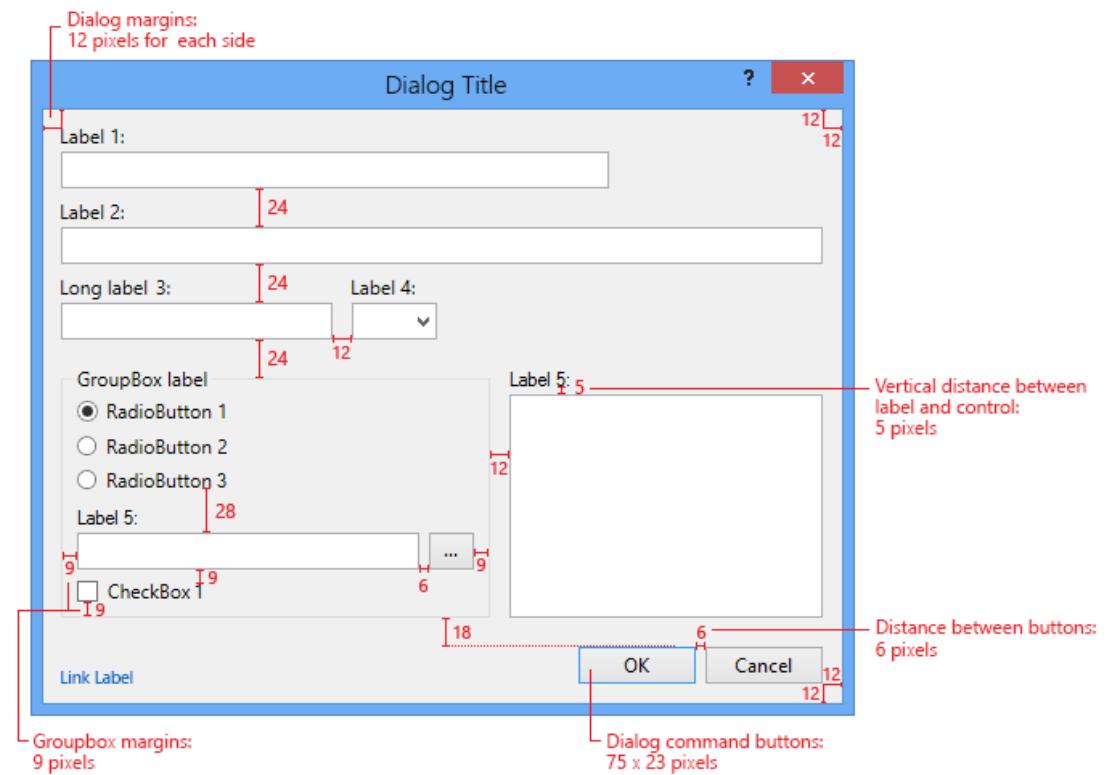
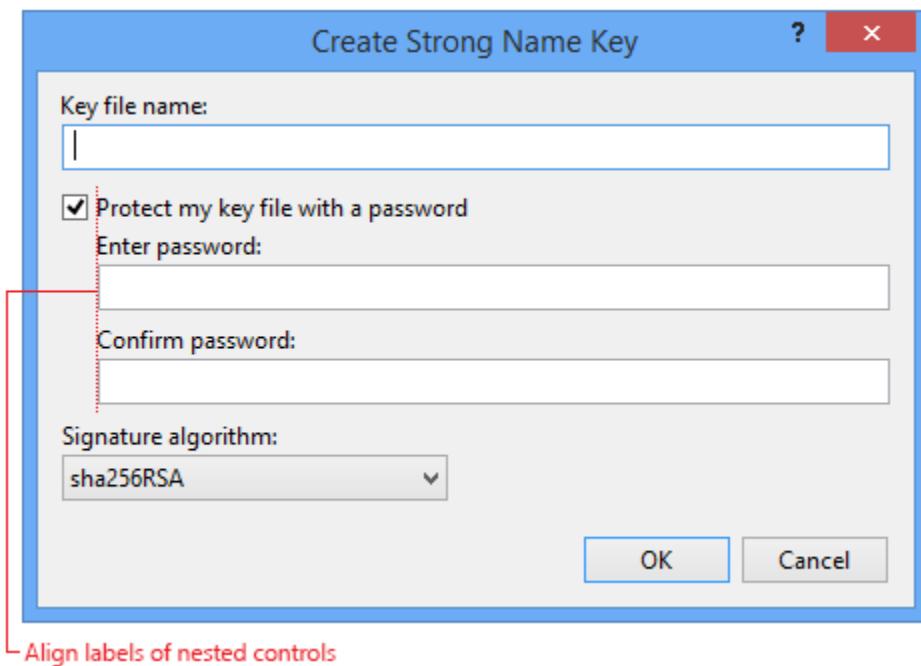
Alignment

- Invisible lines that run through the interface and “attract” the left- or right-edge of a widget control
 - Vertical
 - Horizontal

Example

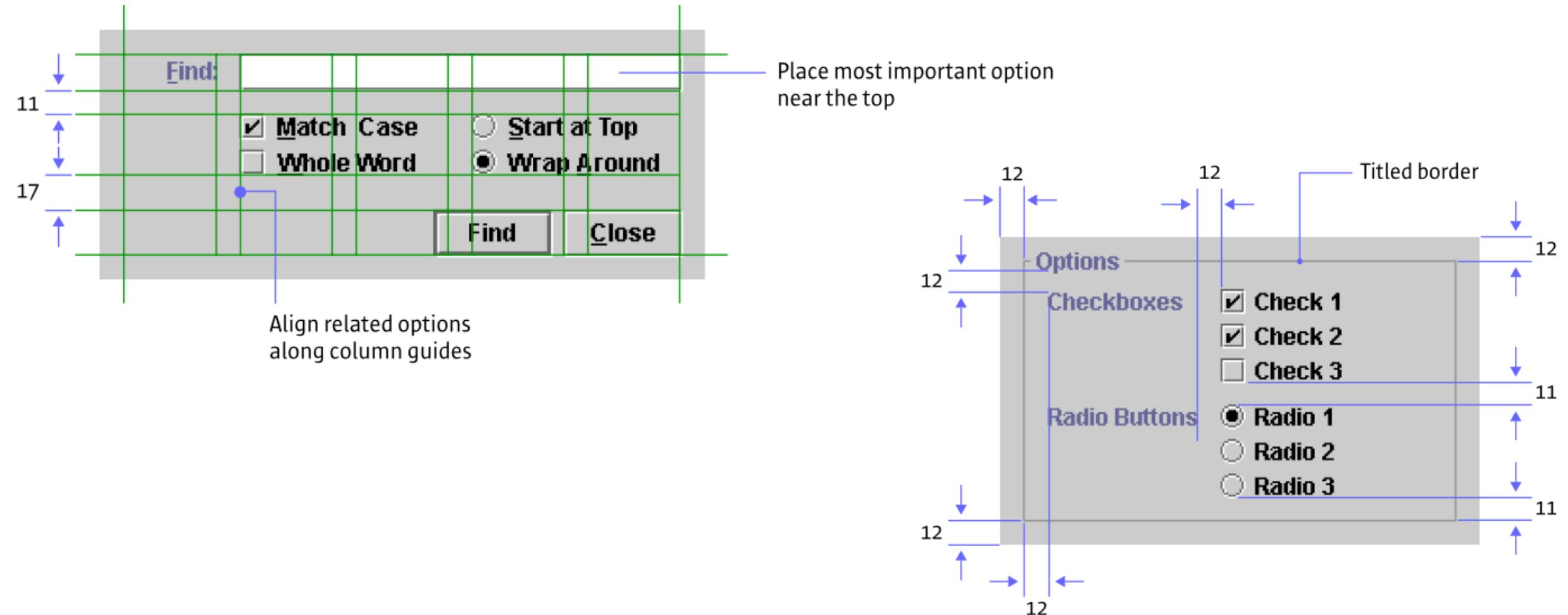


Examples



<https://docs.microsoft.com/en-us/visualstudio/extensibility/ux-guidelines/layout-for-visual-studio?view=vs-2019>

Examples

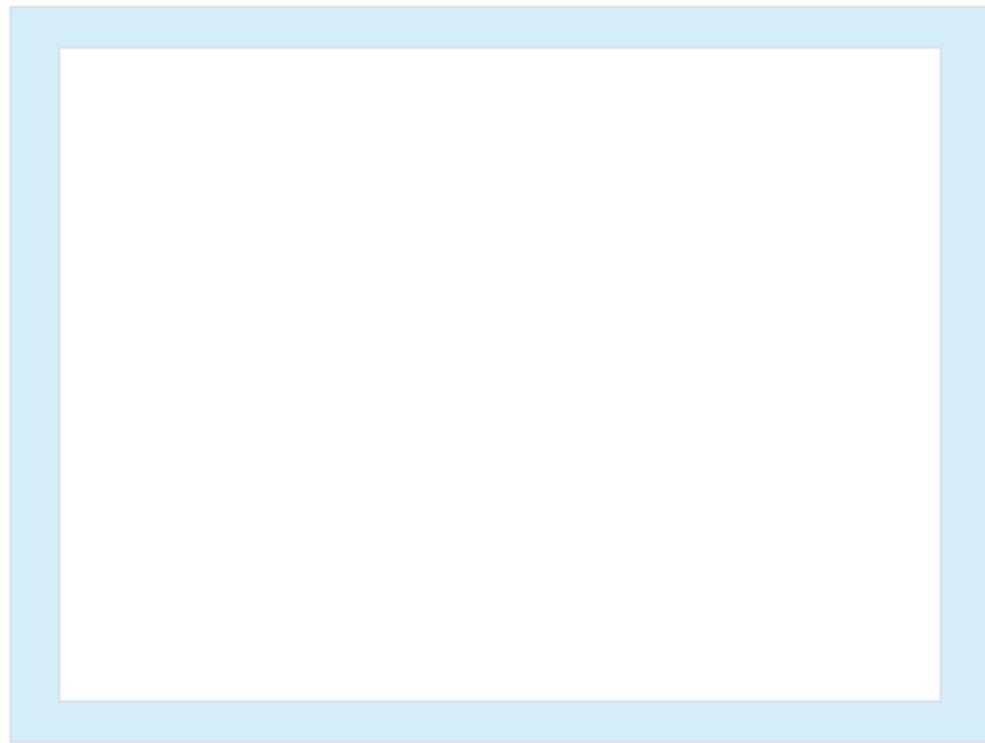


Grid Layout Ingredients

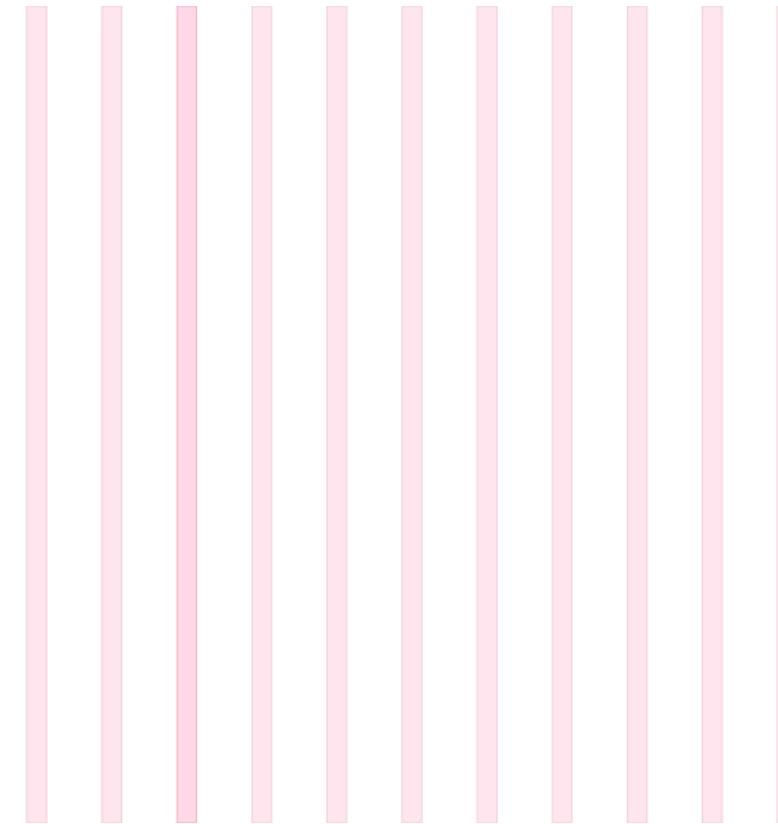
- **Guides:** The edge which you choose to align content with
- **Column:** A vertical division of content
- **Row:** A horizontal division of content
- **Margins:** The area surrounding your content
- **Gutters:** The margins between columns
- **Hang-line:** A horizontal guide to align content to hang off of
- **Baseline:** The horizontal guide for an element to sit on top of
- **Rhythm:** Proportion systems that can help define the sizing frequency and spacing of each of the above elements.

Grid Layout Ingredients

Margins

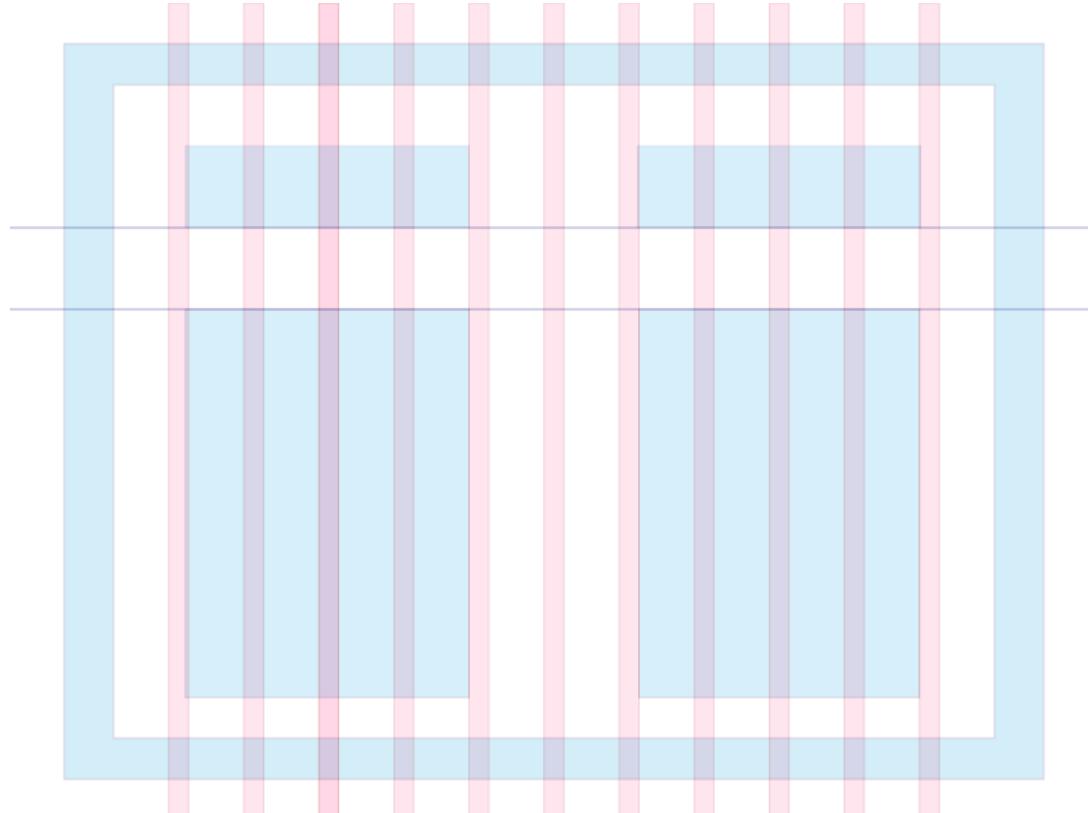


Columns & Gutters



Grid Layout Ingredients

Hanglines and Baselines

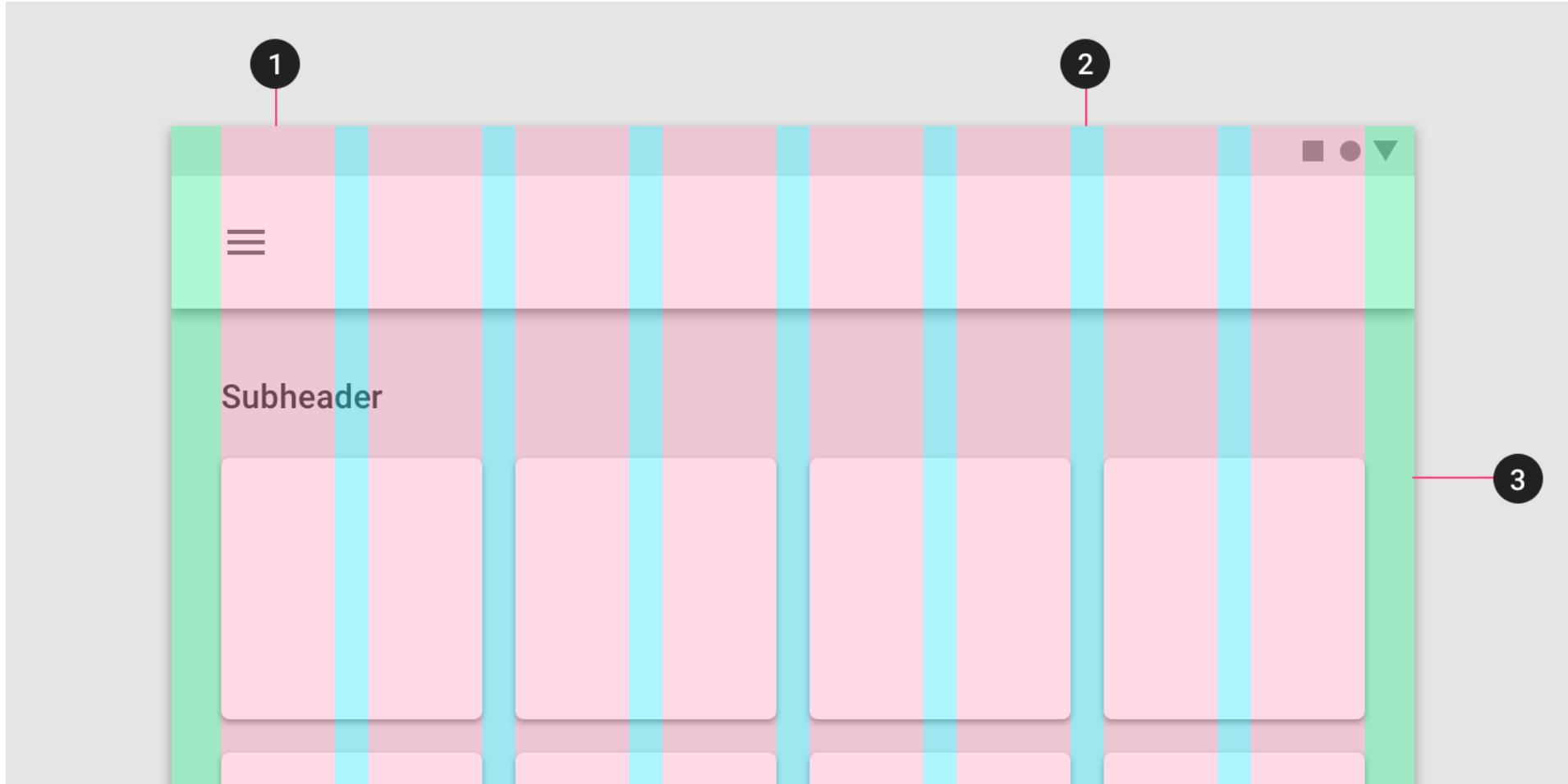


Baseline Grids



Example Grid-based layout

1. Columns
2. Gutters
3. Margins



Example: Bootstrap grid

Always 12 columns in total

May choose to span a group of columns

Each column is tagged according to the screen size:

- xs (phones - <768px)
- sm (tablets - >=768px)
- md (small laptops - >=992px)
- lg (laptops and desktops - >1200px)

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1				
span 4				span 4				span 4							
span 4				span 8											
span 6						span 6									
span 12															

Responsive grid layout

The image shows four screenshots of a website titled "Learn to Create Websites" from "Tutorial Republic". The website uses a responsive grid layout with a yellow header bar at the top. Below the header, there are several sections: "HTML", "CSS", "JavaScript", "Bootstrap", "PHP", "SQL", "References", and "FAQ". Each section contains a brief description and a "Learn More" button. The layout is designed to be responsive, with columns collapsing on smaller screens. A yellow callout box highlights the HTML section's code.

`<div class="row">
 <div class="col-md-6 col-lg-4 col-xl-3">
 <h2>HTML</h2>
 <p>...</p>
 <p>...</p>
 </div>`

<https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/bootstrap-responsive-layout.php>

Other grid systems

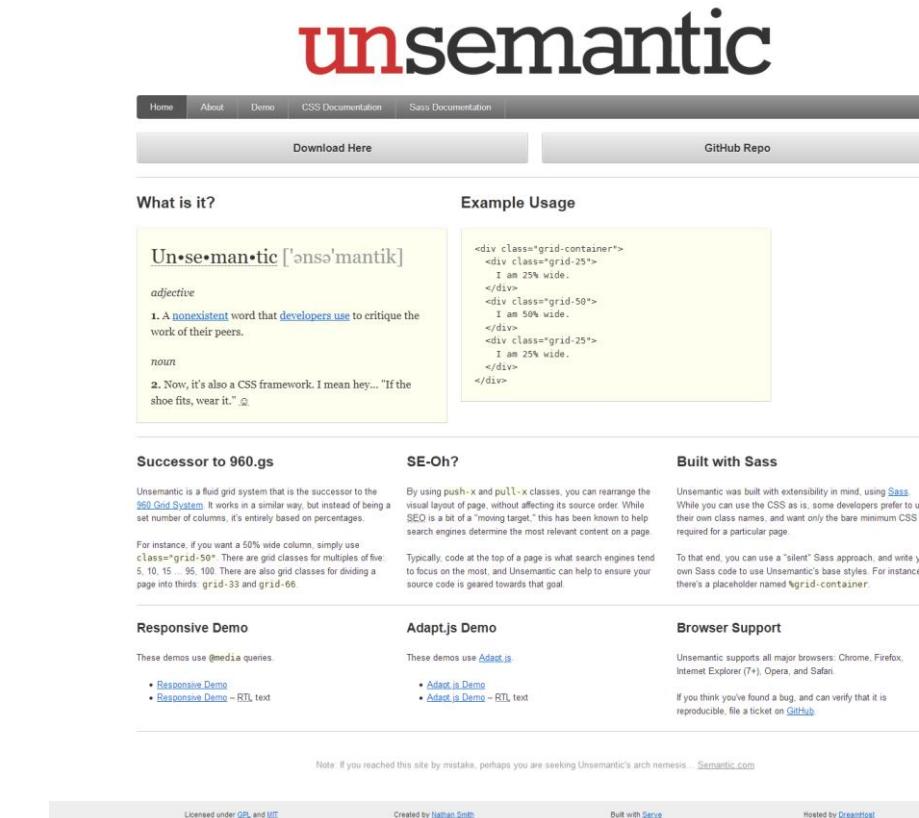
960 grid (fixed width, 12 or 16 col)



The screenshot shows the homepage of the 960 Grid System. At the top, there's a navigation bar with links for "Home", "About", "Demo", "CSS Documentation", and "Sass Documentation". Below the navigation is a large "Big ol' DOWNLOAD button :)" with several arrows pointing left and right. Underneath the button are two buttons: "INTERVIEW ABOUT 960.gs" and "VIEW SLIDES ABOUT THE 960 GRID SYSTEM". Further down are links for "ADAPT.JS - ADAPTIVE CSS", "CUSTOM CSS GENERATOR", and "GRID OVERLAY BOOKMARK". The main content area is divided into three columns: "Essence", "Dimensions", and "Purpose". The "Dimensions" section contains detailed information about the 12 and 16 column grids, including pixel measurements and gutter widths. The "Purpose" section explains the system's benefits for rapid prototyping and integration into production environments. Below these sections are "More Columns" and "Source Order" sections, which discuss how the grid can be rearranged. At the bottom, there are two examples of websites using the 960 grid: "Sony Music — 16 col" and "Drupal — 12 col".

<https://960.gs/>

Unsemantic (responsive, based on %)



The screenshot shows the homepage of the Unsemantic website. The header features the word "unsemantic" in red and black. Below the header is a navigation bar with links for "Home", "About", "Demo", "CSS Documentation", and "Sass Documentation". There are also "Download Here" and "GitHub Repo" buttons. The main content area is divided into two main sections: "What is it?" and "Example Usage". The "What is it?" section includes a definition of "Un•se•man•tic" as an adjective and a noun, along with a note about its nonexistence. It also mentions that it's a CSS framework. The "Example Usage" section shows a code snippet for creating a grid container with 12 columns, each 25% wide. Below these sections are several other articles and demos, such as "Successor to 960.gs", "SE-Oh?", "Built with Sass", "Responsive Demo", "Adapt.js Demo", and "Browser Support". The footer contains a note about the site being a mistake for Unsemantic's arch nemesis, links to GitHub and Creative Commons, and a copyright notice.

<https://unsemantic.com/>

Grid structure

Main body:
Mix of 2x and 3x
columns

Alternating row
types



Title area outside the grid

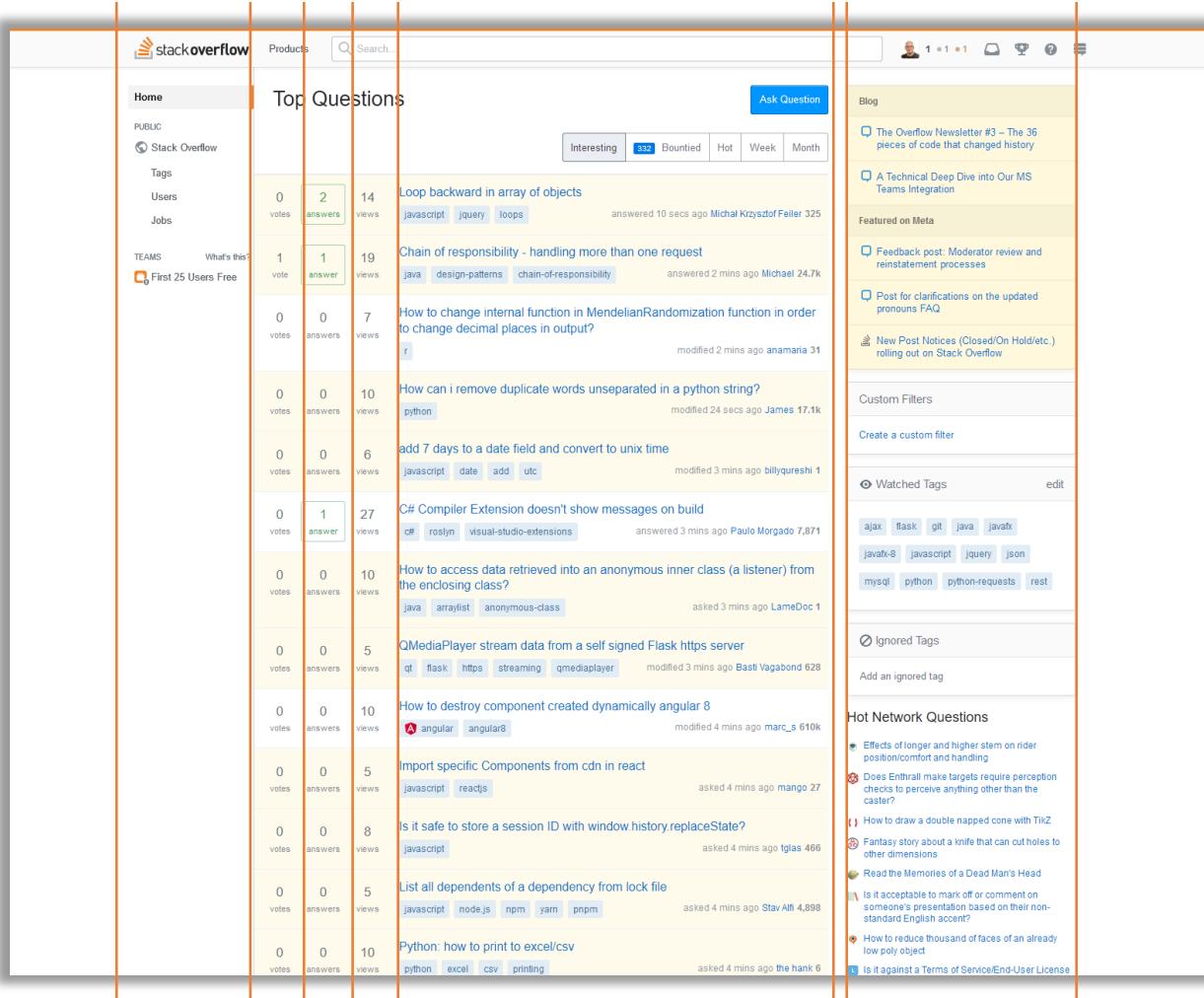
Right column for other types of articles

Grid structure

Main content
(center, wide)

Navigation
(left, smaller)

Related content
(right, smaller)



Example

Software								Top	
1° anno		Periodo	Codice	Lingua	Insegnamento	Crediti	Docente	Note	Vincoli
1	01PDWOW	EN	Information systems	ING-INF/05 (6)		6	M. Morisio	View	
1	02GOLOV	IT	Architetture dei sistemi di elaborazione	ING-INF/05 (10)		10	P. Bernardi E. Sanchez Sanchez	View	
1	02LSEOV	EN	Computer architectures	ING-INF/05 (10)	Ottobre	10	P. Montuschi	View	
1	01SQIOV	EN	Data Science and Database Technology	ING-INF/05 (6)		8	S. Chiusano	View	
1	01SQMOV	IT	Data Science e Tecnologie per le Basi di Dati	ING-INF/05 (8)		8	E. Baralis	View	
1	01OTWOW	EN	Computer network technologies and services	ING-INF/05 (6)		6	M. Baldi	View	
1	02KPNOV	IT	Tecnologie e servizi di rete	ING-INF/05 (6)		6	G. Marchetto	View	
2	02JEUOV	EN	Formal languages and compilers	ING-INF/05 (6)		6	R. Sisto	View	
2	05BIDOV	IT	Ingegneria del software	ING-INF/05 (8)		8	G. Bruno	View	
2	04GSPOV	EN	Software engineering	ING-INF/05 (8)		8	M. Morisio	View	
2	01UDFOV	IT	Applicazioni Web I	ING-INF/05 (6)		6	E. Masala	View	
2	01TXYOV	EN	Web Applications I	ING-INF/05 (6)		6	F. Corno	View	
2	02GRSOV	IT	Programmazione di sistema	ING-INF/05 (10)		10	G. Cabodi	View	
2	01NYHOV	EN	System and device programming	ING-INF/05 (10)		10	S. Quer	View	
2° anno		Periodo	Codice	Lingua	Insegnamento	Crediti	Docente	Note	Vincoli
1	01TYMOV	EN	Insegnamento a scelta 1	Information systems security	ING-INF/05 (6)	6		View	
1	01DUUOV	IT	Ottobre	Sicurezza dei sistemi informativi	ING-INF/05 (6)	6		View	
1	01SQNOV	EN	Software Engineering II	ING-INF/05 (6)		6		View	
1,2	29EBHOV		Crediti liberi			6			
2			Tesi			30			
			Insegnamento a scelta 2			6			
Insegnamento a scelta 1									
Periodo	Codice	Lingua	Insegnamento			Crediti	Docente	Note	Vincoli
1	01TYDOV	EN	Cloud Computing	ING-INF/05 (6)		6		View	
1	01PDCOV	EN	Digital control technologies and architectures	ING-INF/04 (6)		6		View	
1	01TXZOV	EN	Distributed systems programming	ING-INF/05 (6)		6		View	Si
1	01NWPOV	IT	Elaborazione dell'audio digitale	ING-INF/05 (6)		6		View	
1	01UDGOV	EN	Energy management for IoT	ING-INF/05 (6)		6		View	Si
1	02JSKOV	EN	Human Computer Interaction	ING-INF/05 (6)		6		 View	
1	01SQIOV	EN	Machine Learning and Artificial Intelligence	ING-INF/05 (6)		6		View	
1	01PDXOV	EN	Modern design of control systems	ING-INF/04 (6)		6		View	
1	01OUUVOV	EN	Optimization methods and algorithms	ING-INF/04 (6)		6		View	
1	01ACETOV	EN	MAT/09 (6)			6		View	

Example (2015 vs 2019)

Add an address

Full Name:

Address Line 1:
Street address, P.O. box, company name, c/o

Address line 2:
Apartment, suite, unit, building, floor, etc.

City:

State/Province/Region:

ZIP:

Country: United States ▾

Phone Number: Learn more

Optional Delivery Preferences (What's this?)

Weekend Delivery: Select your preference ▾

Security Access Code:
For buildings or gated communities

Save & Add Payment Method

Save & Continue

Il tuo account > I tuoi indirizzi > Nuovo indirizzo

Aggiungi un nuovo indirizzo

Oppure ritira i tuoi colli quando desideri, presso i nostri punti self-service. Per aggiungere un punto di ritiro o un Amazon Locker, clicca [qui](#).

Paese/Regione

Italia ▾

Nome e cognome

Indirizzo

Via e numero civico

Scala, piano, interno ecc. (Opzionale)

Città

Provincia

Codice postale

Numero di telefono

Può essere utilizzato per aiutare consegna

Aggiungi istruzioni di consegna

Consegna nel fine settimana

Seleziona la tua disponibilità ▾

Aggiungi indirizzo

Some guidelines

- When designing a template, start from the longest block of text
- Left-aligned text is (usually) faster to skim
- Alignment guides the eye and reduces clutter
 - Avoid slight misalignments
 - Patterns and deviations are “automatically” detected
 - Deviate from a pattern for strategic reasons
 - Use visual proximity and scale to convey semantic information

Colors

The most dangerous weapon in your toolset

Colors...

The collage consists of three screenshots from the [LINGSCARS.com](http://LINGS CARS.com) website, each featuring a different background or graphic overlay, all set against a vibrant, multi-colored paisley pattern.

Screenshot 1: A screenshot of the website's homepage. It features a large "I AM LING YOU CAN TRUST ME" banner with a photo of Ling Valentine. Below it is a "Menu" with links to Home, Cars, Vans, Customers, About Ling, Fun stuff, Free stuff, and Live staff. To the right is a section titled "Leader of the Pack" with a photo of Ling on a motorbike and a quote from The Guardian: "[Ling Valentine is] Britain's **BIGGEST** individual seller of new cars." At the bottom are sections for "MY BEST SELLING CAR LEASING DEALS!" (Fiat 500, Renault Clio, Citroen C3) and "Car Leasing Online Service Response Times" (0:03, 0:05).

Screenshot 2: A screenshot of a news article from 4 News about Ling Valentine. The headline reads "Believe it or not, this Gateshead-based website, featuring Mrs Ling jigging on her motorbike, is one of the biggest online drivers of car sales in Great Britain" dated 25th July 2017. The article includes a photo of Ling on her motorbike and a video player.

Screenshot 3: A screenshot of the website's delivery tracking page. It shows a "Stop" sign icon and a "1 DELIVERY TODAY" message with a photo of Ling. Below it is a list of recent deliveries:

- Ford Ka+ to Arthur ATTLEBOROUGH, NR17
- Renault Captur to Cath PONTEFRACt, WF81
- Mercedes GLC Coupe to Bill BEDLINGTON, NE22
- BMW 2 Series Convert... to Pingu DERBY, DE56
- Nissan Qashqai to Arlene GLASGOW, G11
- Volvo XC60 Estate to Saif HILTON KEYNES, MK8
- Seat Leon to Ben BARNESLEY, S70
- Skoda Kodiaq Estate to Hannah HAY-ON-WYE, HR3
- Renault Clio to Paul MIDDLEBROUGH, TS7
- Renault Clio to Paul MIDDLEBROUGH, TS7
- Seat Arona to Steve LONDON, SE18
- Seat Leon to Adam HATFIELD, AL10
- Audi A3 Sportback to Chris WYMONDHAM, NR18

Colors

- Be careful, don't exaggerate
- Design in grayscale, first
 - Ensure information is conveyed by text and layout
- When adding colors, try to conserve the same luminance of the grayscale design
- Assign meaning to color
- Use a limited and consistent palette and use slight variations

Example

The image displays two identical screenshots of the Stack Overflow homepage, illustrating a user interface comparison or a specific feature.

Left Screenshot (Original UI):

- Top Questions:**
 - Loop backward in array of objects (2 answers, 14 views)
 - Chain of responsibility - handling more than one request (1 answer, 19 views)
 - How to change internal function in MendelianRandomization function in order to change decimal places in output? (0 answers, 7 views)
 - How can I remove duplicate words unseparated in a python string? (0 answers, 10 views)
 - Add 7 days to a date field and convert to unix time (0 answers, 6 views)
 - # Compiler Extension doesn't show messages on build (1 answer, 27 views)
 - How to access data retrieved into an anonymous inner class (a listener) from the enclosing class? (0 answers, 10 views)
 - QMediaPlayer stream data from a self signed Flask https server (0 answers, 5 views)
 - How to destroy component created dynamically angular 8 (0 answers, 10 views)
 - Import specific Components from cdn in react (0 answers, 5 views)
 - Is it safe to store a session ID with window.history.replaceState? (0 answers, 8 views)
 - List all dependents of a dependency from lock file (0 answers, 5 views)
 - Python: how to print to excel/csv (0 answers, 10 views)
- Blog:**
 - The Overflow Newsletter #3 – The 36 pieces of code that changed history
 - A Technical Deep Dive into Our MS Teams Integration
 - Feedback post: Moderator review and reinstatement processes
 - Post for clarifications on the updated pronouns FAQ
 - New Post Notices (Closed/On Hold/etc.) rolling out on Stack Overflow
- Custom Filters:**
 - Create a custom filter
- Watched Tags:**
 - edit
 - ajax flask git java javafx
 - javascript jquery json
 - mysql python python-requests rest
- Ignored Tags:**
 - Add an ignored tag
- Hot Network Questions:**
 - Effects of longer and higher stem on rider position/comfort and handling
 - Does Entrail make targets require perception checks to perceive anything other than the caster?
 - How to draw a double napped cone with TikZ
 - Fantasy story about a knife that can cut holes to other dimensions
 - Read the Memories of a Dead Man's Head
 - Is it acceptable to mark off or comment on someone's presentation based on their non-standard English accent?
 - How to reduce thousand of faces of an already low poly object
 - Is it against a Terms of Service/End-User License

Example

The screenshot shows the official website of Politecnico di Torino. At the top, there's a dark blue header bar with the university's logo and name. Below it, a navigation bar features five main categories: "SCOPRIRE L'ATENEO", "DIDATTICA E STUDENTI", "IL MONDO DELLA RICERCA", "INNOVAZIONE PER LE IMPRESE", and "CAMPUS INTERNAZIONALE". A search bar and user login options are also present. The main content area is titled "festival della TECNOLOGIA" and "TORINO, 7-10 NOV 2019". Below this, a large graphic of a stylized 'T' made of horizontal bars is displayed. The text "Tecnologia è Umanità" is written in cursive script. A message at the bottom left says "È online il programma del Festival della Tecnologia". The footer contains sections for "EVENTI" (with two items listed), "AVVISI E SCADENZE" (with three items listed), and an "ACCESSO RAPIDO" sidebar with links like "Apply@PolTo", "Iscrizioni online", and various academic services.

This screenshot shows the same website layout as the first one, but with a visual search result overlaid. A large orange dashed rectangle highlights the central content area where the festival banner is located. This indicates that the search results are focused on this specific section of the website.

Palettes

Allegato 1

ABACO COLORI POLITO

BLU

PANTONE



288 CVP

CMYK



100/80/0/30

90%



90%

80%



80%

70%



70%

60%



60%

50%



50%

ARANCIO

PANTONE



ORANGE 021

CMYK



0/70/90/0

CMYK



0/70/100/0

137 CVP



137 CVP

CMYK



0/60/90/0

CMYK



0/60/100/0

CMYK



0/50/90/0

CMYK



0/50/100/0

CMYK



0/40/90/0

CMYK



0/40/100/0

CMYK



0/30/90/0

CMYK



0/30/100/0

CMYK



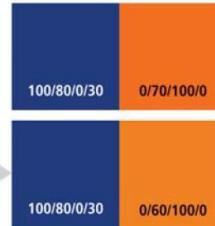
130 CVP

COMBINAZIONI

CMYK



100/80/0/30



0/70/100/0



100/80/0/30



0/60/100/0



100/80/0/30



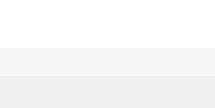
0/50/100/0



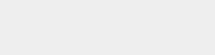
100/80/0/30



0/40/100/0

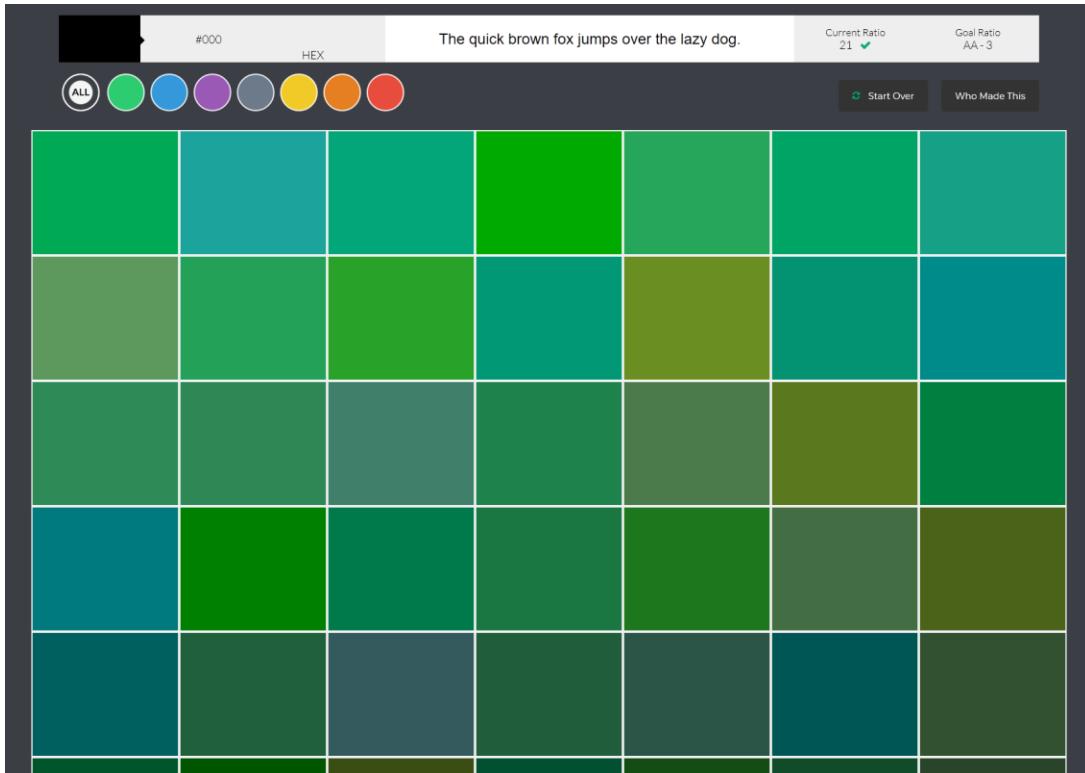


100/80/0/30



0/30/100/0

Color contrast



Default type color On light			Default type color On dark		
Primary	#000000	1a	Primary	#FFFFFF	1a
Secondary	#000000	0.54a	Secondary	#FFFFFF	0.54a
Disabled	#000000	0.26a	Disabled	#FFFFFF	0.26a
Link	#3367D6	1a	Link	#7BAAF7	1a
Positive	#0B8043	1a	Positive	#57BB8A	1a
Negative	#C53929	1a	Negative	#E67C73	1a
Warning	#EA6100	1a	Warning	#F7CB4D	1a

Google Chrome Palette

<http://colorsafe.co/>

Reading and Navigating

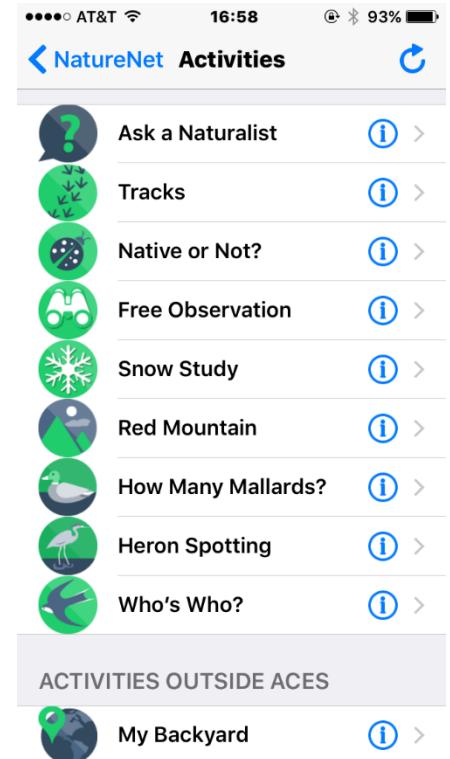
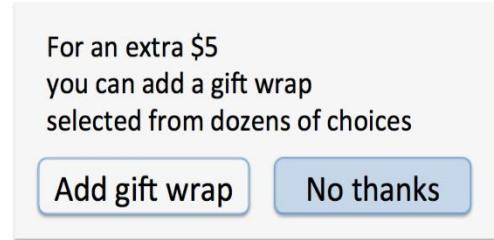
«Informavores» must quickly find the information they need

Navigation

- Enables users to know where they are and to steer themselves to their intended destination
- Is about getting work done (or having fun) through a series of actions
- May consist of
 - *Task navigation*: successfully operating interactive applications, such as installing a mobile app, completing an on-line survey, or purchasing a ticket
 - *Web navigation*: finding information on a website or browsing social media
 - *Command menu navigation*: finding the action needed in a desktop application
- Has nothing to do with visual elegance / graphic shininess

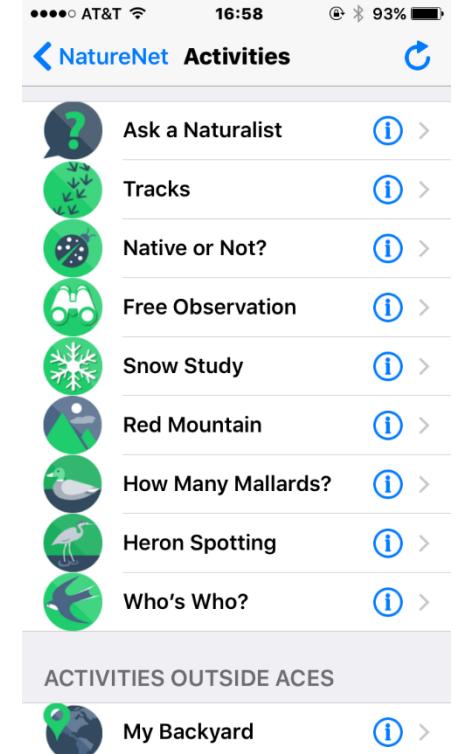
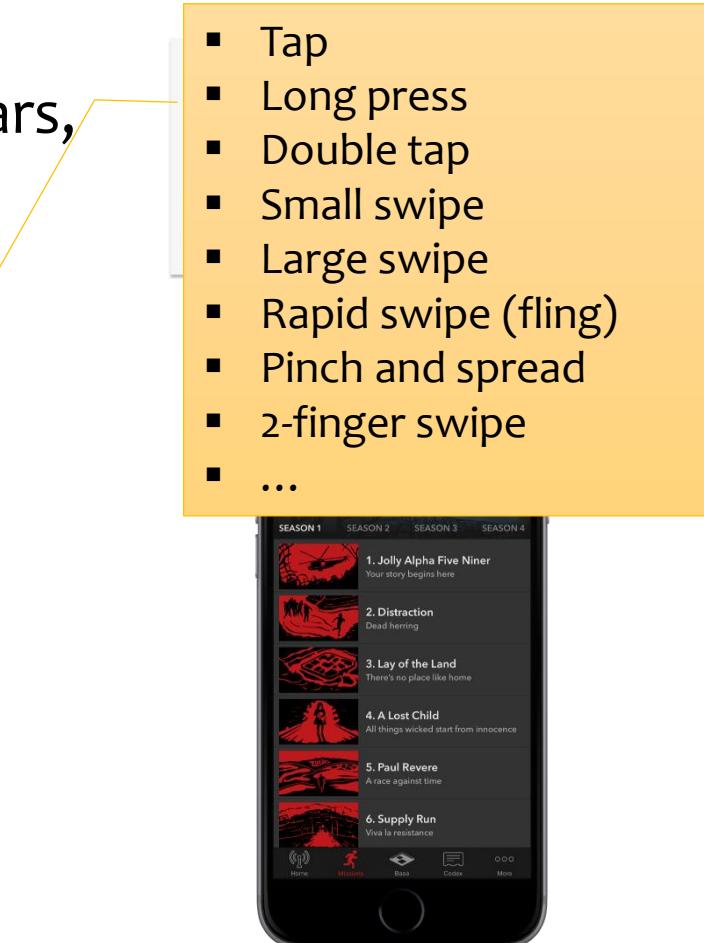
Navigation by selection

- Menu bars, pop-up menus, toolbars, palettes and ribbons
- Shortcuts and gestures for rapid interaction
- Long lists
- Linear versus simultaneous presentation



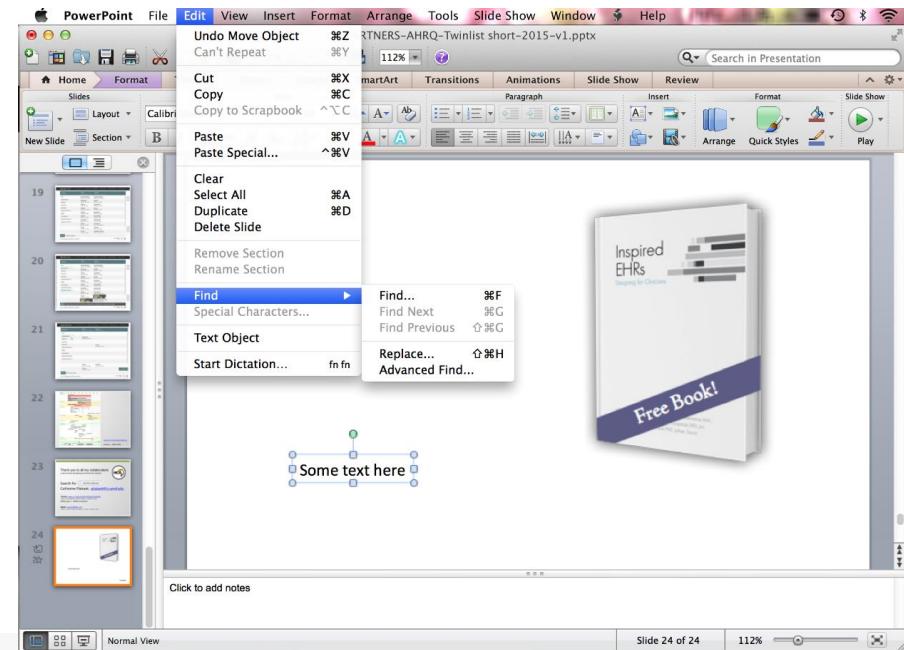
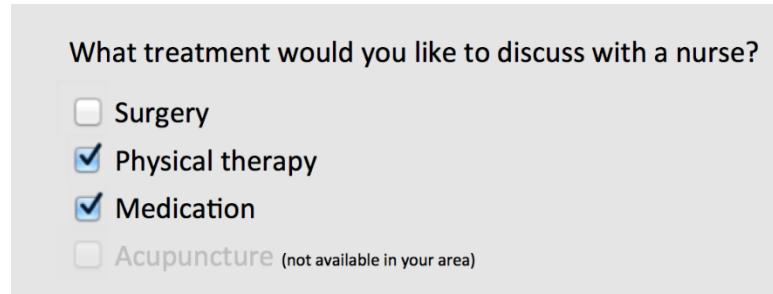
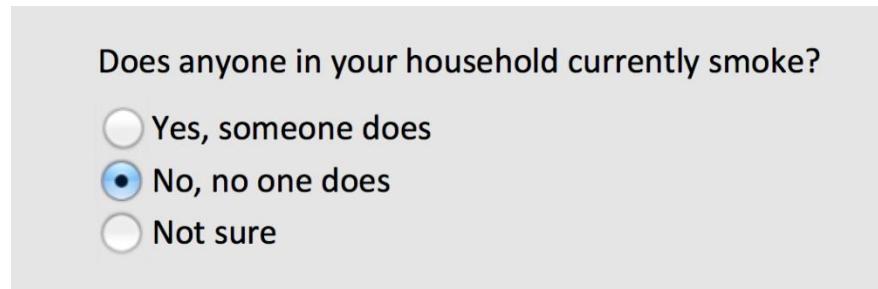
Navigation by selection

- Menu bars, pop-up menus, toolbars, palettes and ribbons
- **Shortcuts and gestures for rapid interaction**
- Long lists
- Linear versus simultaneous presentation



Navigation by selection

- Radio Buttons and Checkboxes
- Menu bars, pop-up menus, toolbars, palettes and ribbons



Menus

The screenshot shows the official NASA website homepage. At the top, there is a dark header bar with the NASA logo and several navigation links: Missions, Galleries, NASA TV, Follow NASA, Downloads, About, and NASA Audiences. A search bar is also present. Below the header, there is a main content area featuring several news stories and images. One prominent story is about the "One-Year Crew" on the International Space Station. Another story discusses the "Martian" Director Ridley Scott's comments on NASA's journey to Mars. There are also sections for an "Eclipse" and a "Supermoon". Other news items include "Good Morning From the International Space Station", "Space Travel", and "SDO Solar Mission". The footer contains the NASA logo and links to National Aeronautics and Space Administration, NASA Official: Brian Dunbar, and various agency reports.



Content organization

- Organizing menus in a meaningful structure results in faster selection time and higher user satisfaction
- Approaches:
 - Linear sequence (e.g. in a wizard or survey)
 - Hierarchical structure (tree) that is natural and comprehensible (e.g. a store split into departments)
 - Network structure when choices may be reachable by more than one path (e.g. websites)

Tree-like content organization

Screenshot of the REI website illustrating tree-like content organization.

The top navigation bar includes: Help, Wish List, Gift Registry, Classes & Events, Store Locator, a shopping cart icon with '0', and Checkout.

Welcome message: Welcome to REI! | [Log In or Register](#)

FREE SHIPPING With \$50 minimum purchase.

Main menu categories: SHOP REI, SHOP REI OUTLET, TRAVEL WITH REI, LEARN, BLOG, MEMBERSHIP, STEWARDSHIP.

Sub-categories under SHOP REI: Camp & Hike, Climb, Cycle, Fitness, Run, Paddle, Snow, Travel, Men, Women, Kids, Footwear, More, Deals.

Category sections:

- Bikes**: Mountain Bikes, Road Bikes, Hybrid Bikes, Kids' Bikes.
- Bike Helmets**: Road Helmets, Mountain Bike Helmets, Kids Helmets.
- Cycling Clothing**: Jerseys, Jackets, Shorts, Tights and Pants, Accessories.
- Cycling Shoes**: Road Shoes, Mountain Bike Shoes.
- Bike Accessories**: Computers, Lights, Locks, Pumps, Racks, Trailers, Trainers.
- Bike Components**: Brakes, Saddles/Seat Posts, Tires, Tubes and Wheels, Tools and Maintenance, Drivetrain Components, Pedals, Handlebars.
- Messengers/Backpacks**: Panniers/Bike Bags.

A promotional sidebar on the right: **GIVE THE GIFT OF GEAR ANYTIME, ANYWHERE**. REI gift & e-gift cards. [Buy now >](#)

Bottom navigation links: Car Racks, Novara Cycling, Cycling Deals, All Cycling.

Filter options: Deals (31), Features (Moisture wicking, Quick drying, Sun-protective fabric, Waterproof, Insulated, Earflaps, Made in USA), Brand (Clear, 686).

Product grid:

- REI Rainwall Rain Jacket - Girls': 4.5 stars (1). \$31.83 - \$64.50. Compare.
- REI Rainwall Rain Pants - Kids': 4.5 stars (1). \$49.50. Compare.
- REI Sahara Convertible Pants - Girls': 4.5 stars (9). \$44.50. Compare.

Product details:

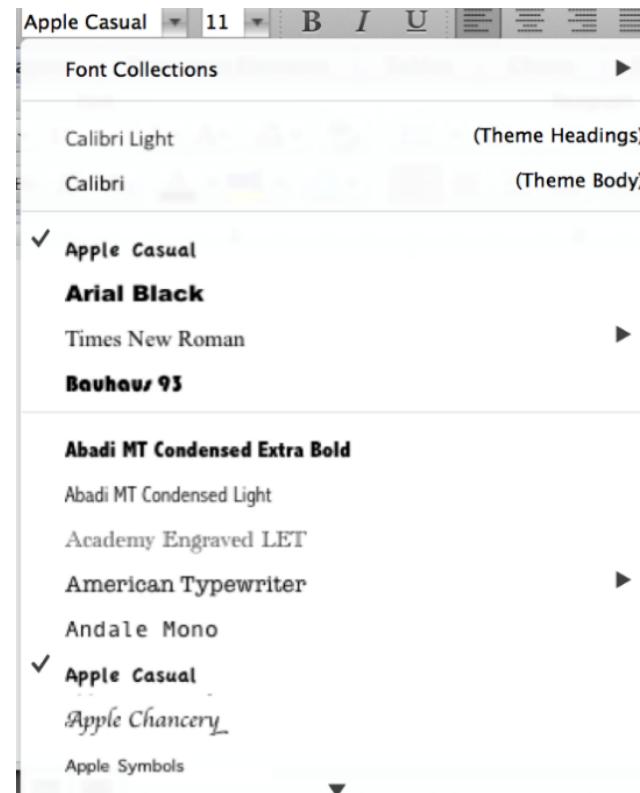
- ONLY AT REI: REI Rainwall Rain Jacket - Girls' (black).
- ONLY AT REI: REI Rainwall Rain Pants - Kids' (black).
- ONLY AT REI: REI Sahara Convertible Pants - Girls' (purple).

Rules for tree-like organization

- Use **task semantics** to organize menus
- Limit the **number of levels** (i.e. prefer broad–shallow to narrow–deep)
- Create groups of **logically similar** items: e.g. Level 1: countries, Level 2: states, Level 3: cities
- Form groups that **cover all possibilities**: e.g. Age ranges: [0–9] [10–19] [20–29] and [>= 30]
- Make sure that items are **non-overlapping**: e.g. use “Concerts” and “Sports.” over “Entertainment” and “Events”
- Arrange items in each branch by **natural sequence** (not alphabetically) or **group** related items
- Keep **ordering** of items **fixed** (or possibly duplicate frequent items in dedicated section of the menu)

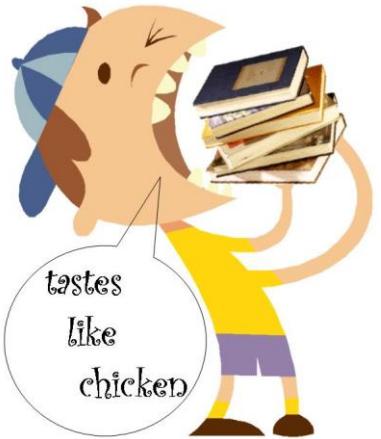
Menu grouping (example)

- 3 groups
 - Template styles
 - Frequently used fonts
 - All fonts
- Alphabetical order within each group
 - Lack of a semantic ordering
- Preview for recognition
- Scrollable list



Information scent

- Informavores orient themselves using *information scent*
- How can we figure out how to get the information we want?
- Do we realize what options are available to us?
- Web pages (and UIs general) provide cues to suggest where to find information
 - Icons, Menus, Breadcrumbs, Color coding, ...



Informavore, an organism that consumes information

Poor information scent

- Users flailing around...
 - Don't know where to go
- Low confidence
 - Users are not sure of their actions, both before executing it and after they see its effects
- Back button
 - When it's used too often...

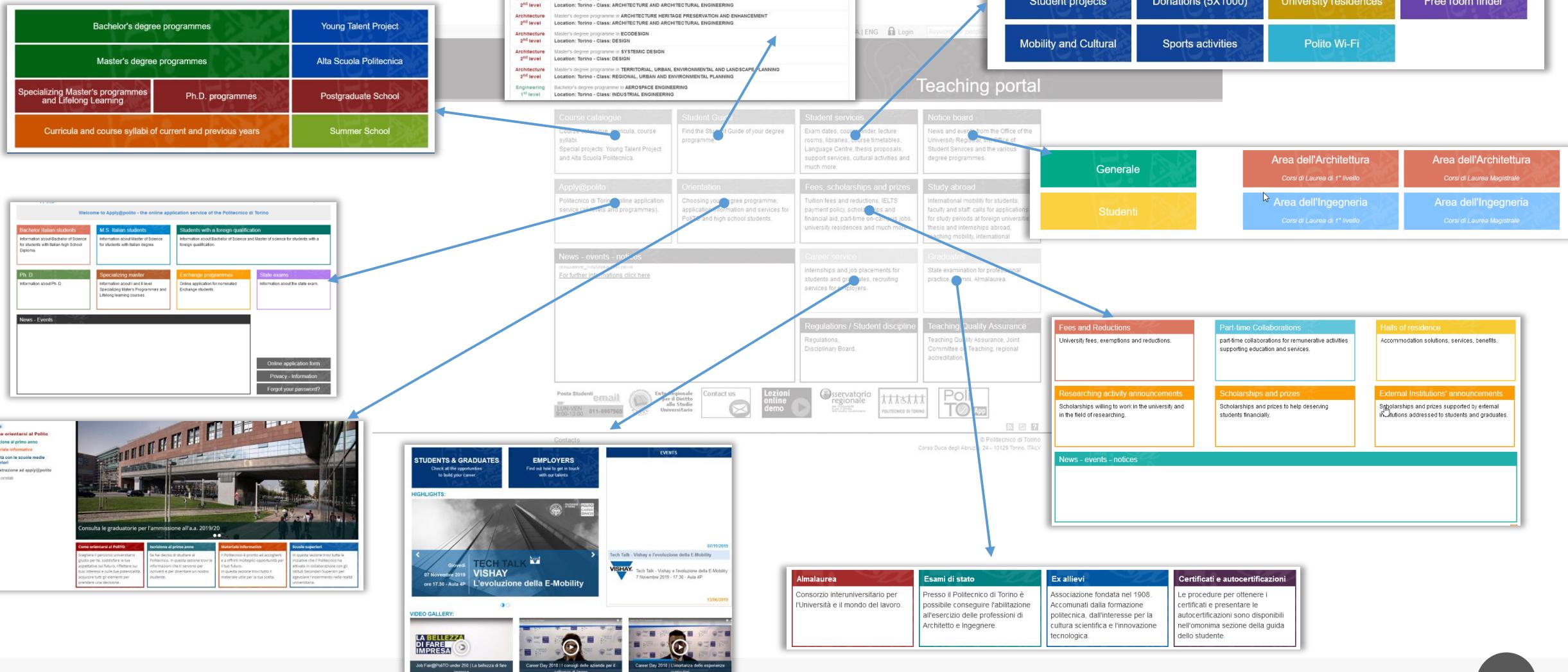
Example

The screenshot shows the homepage of the Politecnico di Torino Teaching portal. At the top, there is a navigation bar with links for 'The Politecnico' (selected), 'Teaching', 'Research', 'Business', and 'International Campus'. It also includes language links ('ITA | ENG'), a 'Login' button, and a search bar. The main header features the university's logo and the text 'POLITECNICO DI TORINO'. Below the header, a large blue banner reads 'Teaching portal'. The page is organized into several colored boxes containing links to various services:

- Course catalogue**: Course catalogue, curricula, course syllabi. Special projects: Young Talent Project and Alta Scuola Politecnica.
- Student Guide**: Find the Student Guide of your degree programme.
- Student services**: Exam dates, course finder, lecture rooms, libraries, course timetables, Language Centre, thesis proposals, support services, cultural activities and much more.
- Notice board**: News and events from the Office of the University Registrar, the Office of Student Services and the various degree programmes.
- Apply@polito**: Politecnico di Torino online application service (all levels and programmes).
- Orientation**: Choosing your degree programme, application information and services for PoliTO and high school students.
- Fees, scholarships and prizes**: Tuition fees and reductions, IELTS payment policy, scholarships and financial aid, part-time on-campus jobs, university residences and much more.
- Study abroad**: International mobility for students, faculty and staff; calls for applications for study periods at foreign universities, thesis and internships abroad, teaching mobility, international.
- News - events - notices**: For further informations click here.
- Career service**: Internships and job placements for students and graduates, recruiting services for employers.
- Graduates**: State examination for professional practice, alumni, AlmaLaurea.
- Regulations / Student discipline**: Regulations, Disciplinary Board.
- Teaching Quality Assurance**: Teaching Quality Assurance, Joint Committee on Teaching, regional accreditation.

At the bottom, there are links for 'Posta Studenti', 'email' (with phone number 010-33300 011-897965), 'Ente Regionale per il Diritto allo Studio Universitario' (with logo), 'Contact us' (with envelope icon), 'Lezioni online demo' (with play button icon), 'Osservatorio regionale' (with logo), 'POLITECNICO DI TORINO' (with logo), and 'PoliTO App' (with logo). There are also social media icons for YouTube, Facebook, and Twitter, along with a 'Help' link. The footer contains the text '© Politecnico di Torino Corso Duca degli Abruzzi, 24 - 10129 Torino, ITALY'.

Example



Example

Survey@Polito

Administration -- Logged in as: corno

Survey Smart Home Survey (ID:365355)

Title: Smart Home Survey (ID 365355)
Survey URL (English): <https://survey.polito.it/365355/lang-en> [EN] [DE] [FR] [IT] [ES] [PT]

Description: This very short survey aims at exploring the future and expected user interaction between user and smart environments, in particular smart homes. The research goal is to update, and compare, the research findings of a similar survey held in year 2010 (5 years ago). The expected completion time for this survey is 5 minutes or less.

Welcome: Thank you for agreeing to take part in this survey. All the answers you give are anonymous, and the data-set will be released as open data after the survey ends. You may choose to reply in any of the supported languages, preferably your mother tongue.

End message: Thanks for completing the survey. The results will be available on the website <http://elite.polito.it/2380988/> The paper describing the previous survey (in 2010) is available at: <http://porto.polito.it/2380988/>

Administrator: Fulvio Corno (fulvio.corno@polito.it)

Start date/time: -

Expiry date/time: -

Template: default

Base language: English

Additional languages: French
German
Italian
Portuguese
Spanish

End URL: e-Lite research group webpage

Number of questions/groups: 11/3

Survey currently active: Yes

Survey table name: beta_survey_365355

Hints: Answers to this survey are anonymized.
It is presented group by group.
Participants can save partially finished surveys
Basic email notification is sent to: fulvio.corno@gmail.com
Regenerate question codes: [Straight] [By group]

LimeSurvey
Version 1.92+ Build 120919

Like it? Donate to LimeSurvey

Common Problems

- Unexpected categories
- Short links
- Hidden navigation
- Icons are too generic, or not easily recognizable

Icons

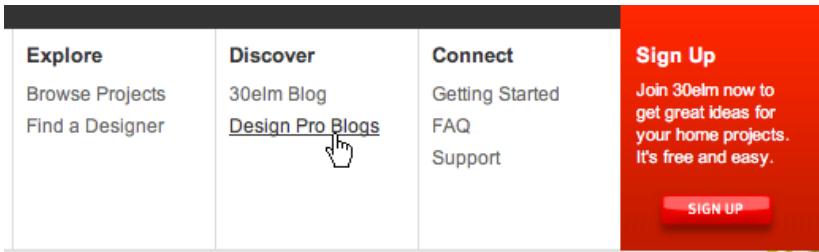
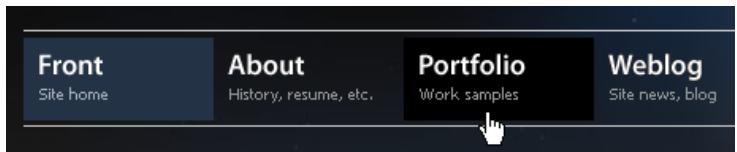
- Icons facilitate recognition over recall
 - When they are consistently used, and frequently visible
- Redundant coding helps recognition and memorization
 - Icon + Text + Tooltip + Context



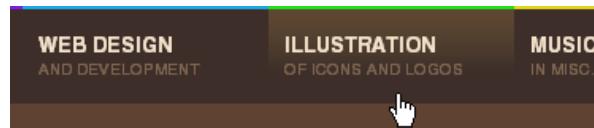
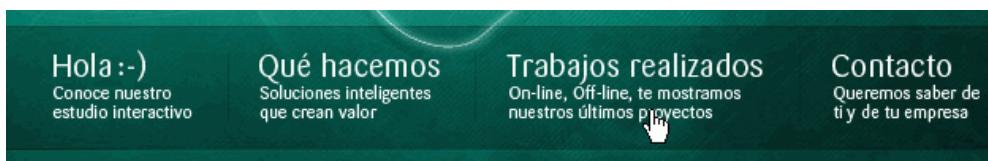
Links

- Always use multi-word links
 - Download the [next assignment template](#)
 - Assignment template: click [here](#)
- Straight language, not jargon
 - [Scor-o-matic](#) download
 - Download the [spreadsheet for computing scores](#)

“Speaking” block navigation



A vertical navigation bar on the right side of the page. It includes sections for "Front Page", "Our Portfolio", "Who We Are", "What We Do", and "Contact Us". Each section has a brief description and a corresponding icon. A mouse cursor is hovering over the "Who We Are" section.



A vertical navigation bar on the right side of the page. It includes sections for "Newsletter", "Store", "Events", "Podcast", and "Coaching". Each section has a brief description and a corresponding icon. A mouse cursor is hovering over the "Coaching" section.

Forms

- Logical field grouping
 - Sections
 - Dividers
 - Columns (spacing)
 - Titles
- Real-time error checking and validation feedback
 - Suggestions for correction
- Explicit submit button

Create an IEEE Account [?](#)

* Required field

Provide your personal information

* Given/First name: Catherine

Middle name:

* Last/Family/Surname: Plaisant

Enter e-mail address & password

The e-mail provided here will be the username of your account.

* E-mail address: cplaisant@

* Re-enter e-mail address:

* Password: Your password is good

* Confirm password:

Set security questions

For your security, IEEE Accounts are required to have two security questions and answers.

* Security question 1: Select

* Type your answer:

* Security question 2: Select

* Type your answer:

[Privacy & Opting Out of Cookies](#)

[Create Account and Continue Joining](#) [Cancel](#)

This screenshot shows a web-based form for creating an IEEE account. The form includes fields for personal information (name, surname), email address, and password, along with a section for setting security questions. Real-time validation feedback is displayed: an error message for an invalid email address and a success message for a strong password. The interface uses standard HTML input types like text and dropdowns, with additional validation logic implemented through JavaScript or server-side processing.

Reading content

- How people read on-line?
- They don't

How Users Read on the Web
by Jakob Nielsen on September 30, 1997
<https://www.nngroup.com/articles/how-users-read-on-the-web/>

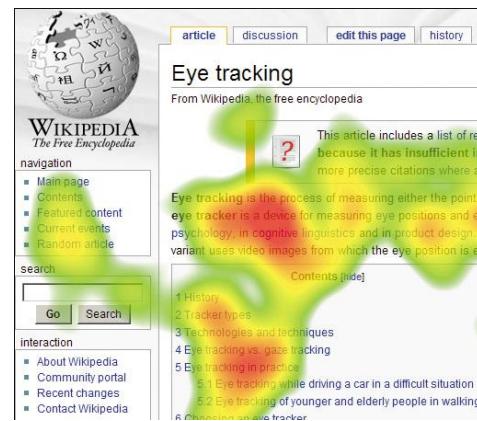
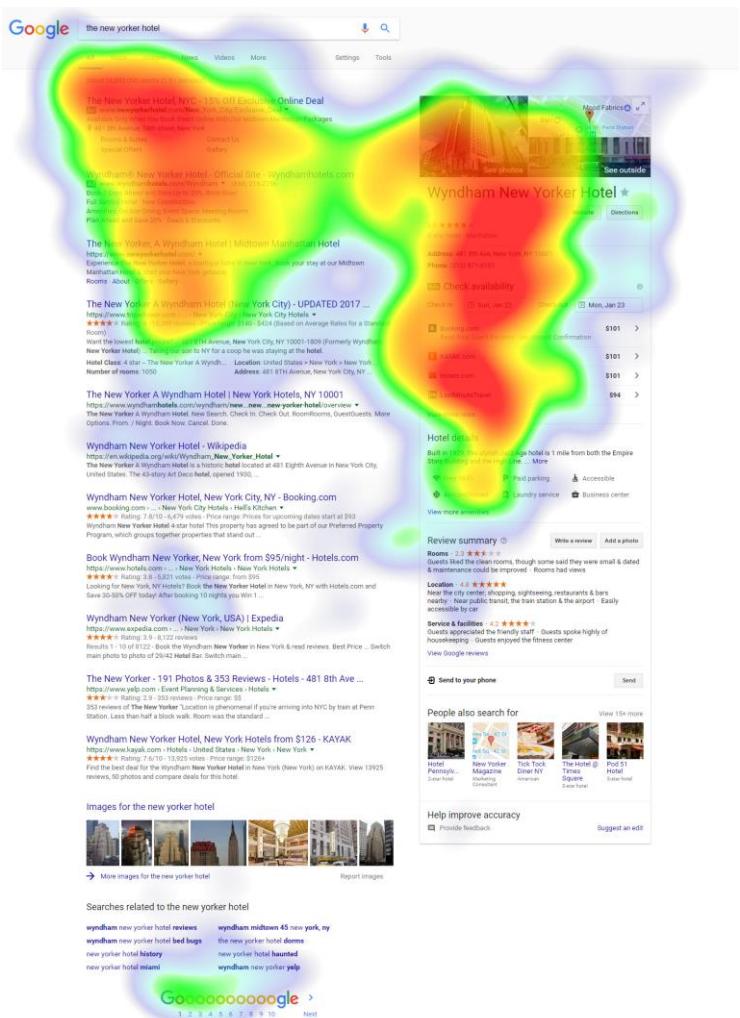
Location on the page

Eye tracking studies show where the users actually look on the page

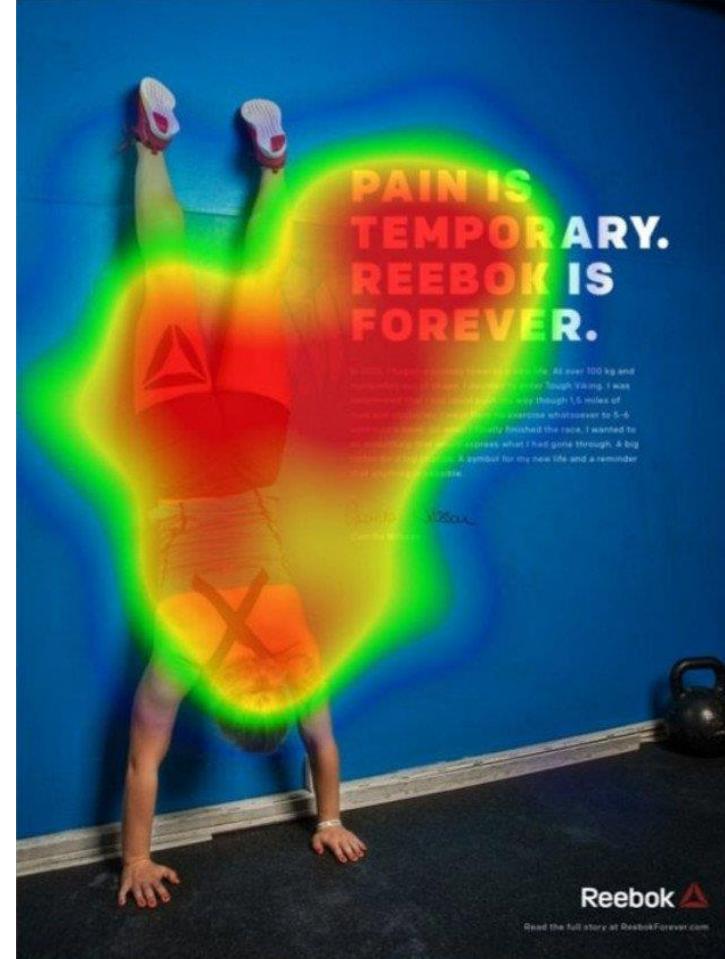
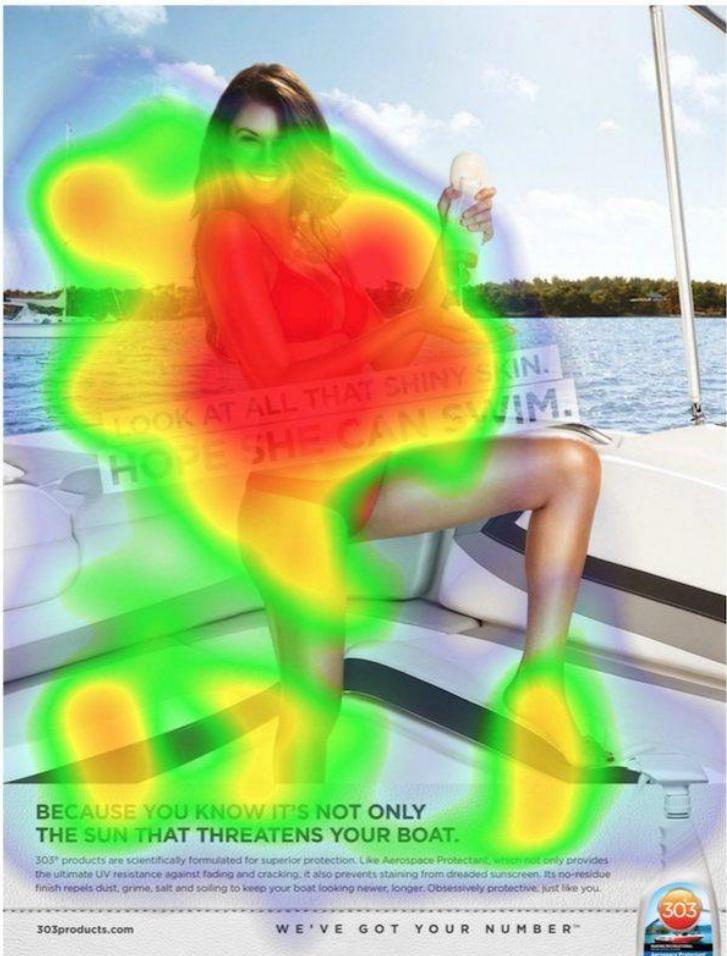
Search “eye tracking heat map” and see the major patterns

Users “glance” and spend limited amount of time on each page.

F-shaped pattern



Did anyone ever look at the product name?



Scanning

WHAT DESIGNERS BUILD...

The screenshot shows the homepage of biztravel.com. At the top is the logo 'biztravel.com'. Below it is a section titled 'Join Biztravel.com Now!' with a list of benefits:

- Fast, easy booking of flights, hotel rooms, & rental cars
- Automated Upgrades to help you fly First Class
- Flight status updates sent to your pager
- Exclusive travel deals for biztravel.com members
- Tracking of your points and miles

At the bottom are two buttons: 'Learn More' and 'Join Now!'

WHAT USERS SEE...

This screenshot shows the same landing page as above, but with most of the content blurred out, representing what a user sees when they scan the page.



I want to
buy a
ticket.

This screenshot shows the blurred landing page again, but with the 'Track My Miles' section highlighted in blue, indicating where the user's eye is drawn.



How do I
check my
frequent
flyer miles?

Experiment

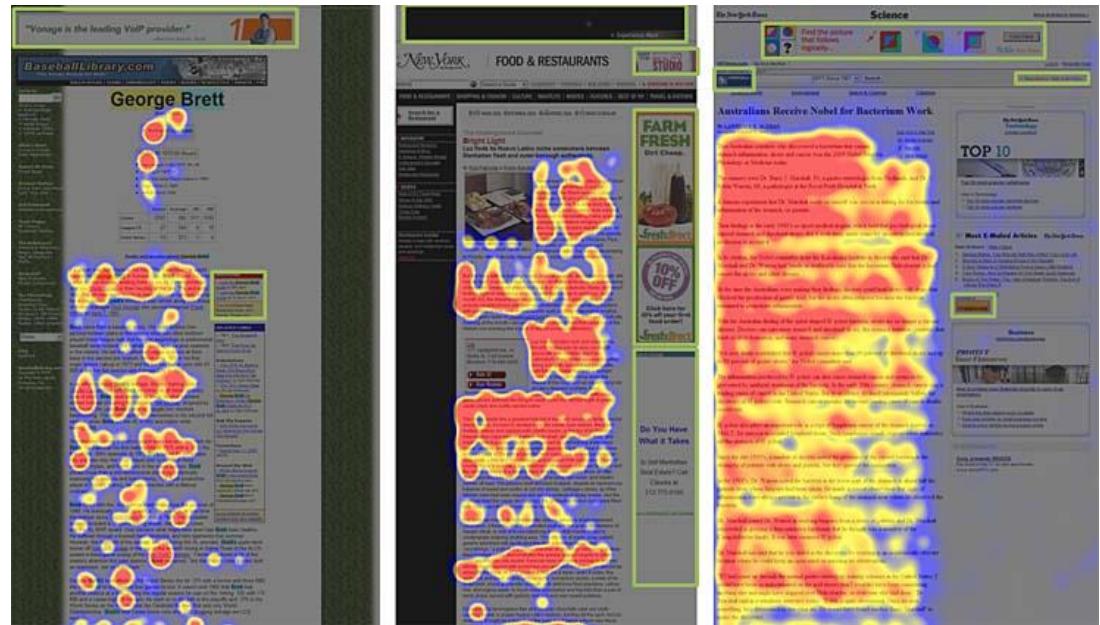
Site Version	Sample Paragraph	Usability Improvement (relative to control condition)
Promotional writing (control condition) using the "marketese" found on many commercial websites	Nebraska is filled with internationally recognized attractions that draw large crowds of people every year, without fail. In 1996, some of the most popular places were Fort Robinson State Park (355,000 visitors), Scotts Bluff National Monument (132,166), Arbor Lodge State Historical Park & Museum (100,000), Carhenge (86,598), Stuhr Museum of the Prairie Pioneer (60,002), and Buffalo Bill Ranch State Historical Park (28,446).	0% (by definition)
Concise text with about half the word count as the control condition	In 1996, six of the best-attended attractions in Nebraska were Fort Robinson State Park, Scotts Bluff National Monument, Arbor Lodge State Historical Park & Museum, Carhenge, Stuhr Museum of the Prairie Pioneer, and Buffalo Bill Ranch State Historical Park.	+58%
Scannable layout using the same text as the control condition in a layout that facilitated scanning	Nebraska is filled with internationally recognized attractions that draw large crowds of people every year, without fail. In 1996, some of the most popular places were: <ul style="list-style-type: none"> •Fort Robinson State Park (355,000 visitors) •Scotts Bluff National Monument (132,166) •Arbor Lodge State Historical Park & Museum (100,000) •Carhenge (86,598) •Stuhr Museum of the Prairie Pioneer (60,002) •Buffalo Bill Ranch State Historical Park (28,446). 	+47%
Objective language using neutral rather than subjective, boastful, or exaggerated language (otherwise the same as the control condition)	Nebraska has several attractions. In 1996, some of the most-visited places were Fort Robinson State Park (355,000 visitors), Scotts Bluff National Monument (132,166), Arbor Lodge State Historical Park & Museum (100,000), Carhenge (86,598), Stuhr Museum of the Prairie Pioneer (60,002), and Buffalo Bill Ranch State Historical Park (28,446).	+27%
Combined version using all three improvements in writing style together: concise, scannable, and objective	In 1996, six of the most-visited places in Nebraska were: <ul style="list-style-type: none"> •Fort Robinson State Park •Scotts Bluff National Monument •Arbor Lodge State Historical Park & Museum •Carhenge •Stuhr Museum of the Prairie Pioneer •Buffalo Bill Ranch State Historical Park 	+124%

Best locations to put content

- Above the fold
- Where people expect
 - Where other pages put similar content
 - **Not** where the ads usually go
- Users will scroll down if the first content is interesting

Banner blindness

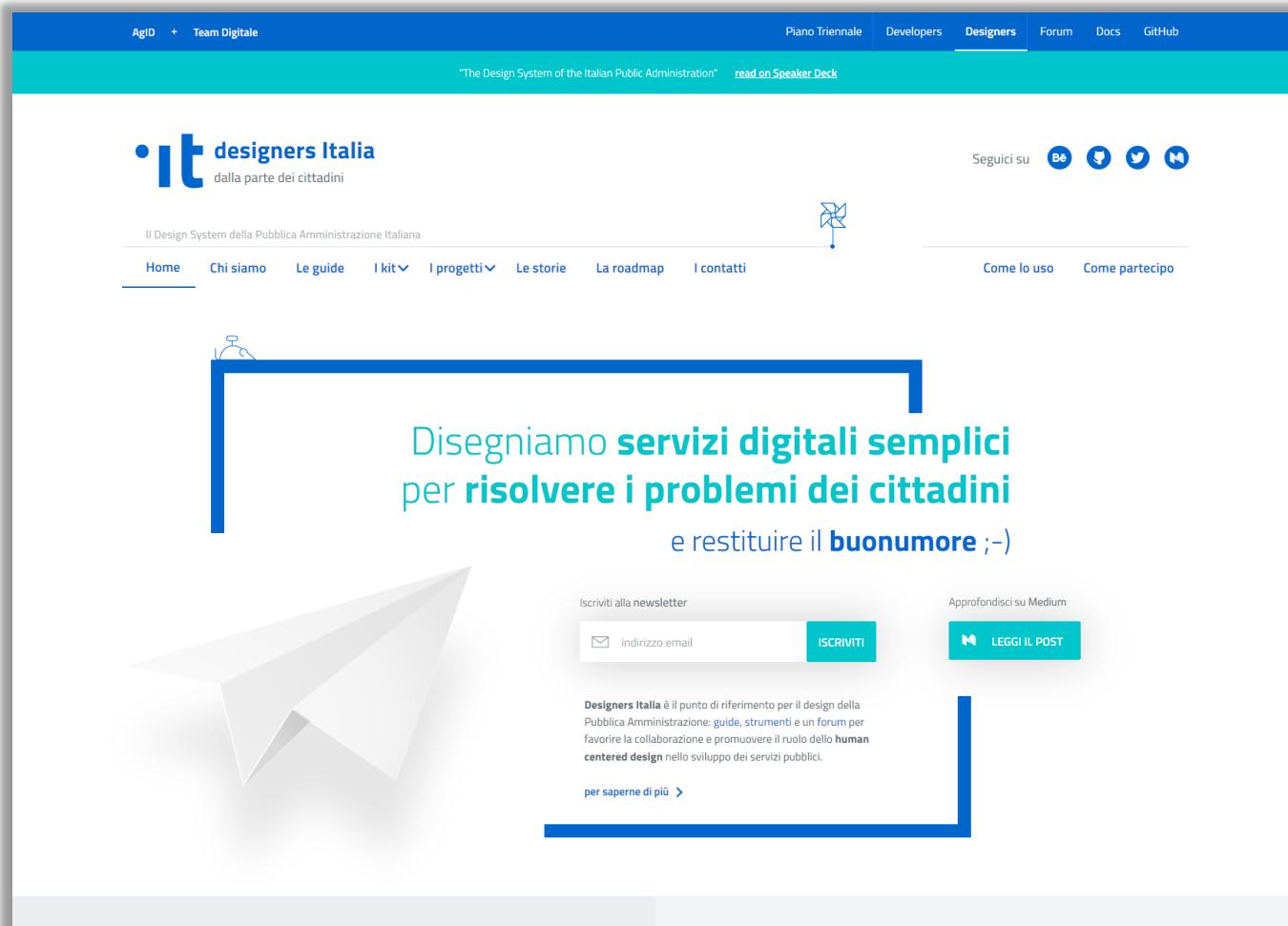
- The brain learns to avoid uninteresting content
- Banners and Advertisements are recognized subconsciously (by their appearance) and are never considered
 - Ads also “poison” adjacent elements
- Lesson learned: never create a message / title / warning / etc. that might look like an ad. (Faux ads)



The Design System of the Italian Public Administration

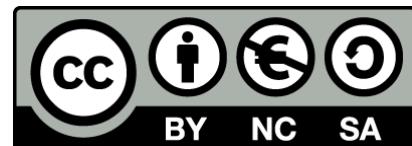
An example toolkit for visual design (targeted at Public Administration websites and services, mainly)

<https://designers.italia.it/>



References

- Scott MacKenzie: Human-Computer Interaction - An Empirical Research Perspective, Morgan Kaufmann
 - Chapter 3: Interaction Elements
- Ben Shneiderman, Catherine Plaisant, Maxine S. Cohen, Steven M. Jacobs, and Niklas Elmquist, Designing the User Interface: Strategies for Effective Human-Computer Interaction
 - Chapter 8: Fluid Navigation
- COGS120/CSE170: Human-Computer Interaction Design, videos by Scott Klemmer, https://www.youtube.com/playlist?list=PLLssT5z_DsK_nusHL_Mjt87THSTIgrsyJ



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