

Design Languages

SWE 432, Fall 2017

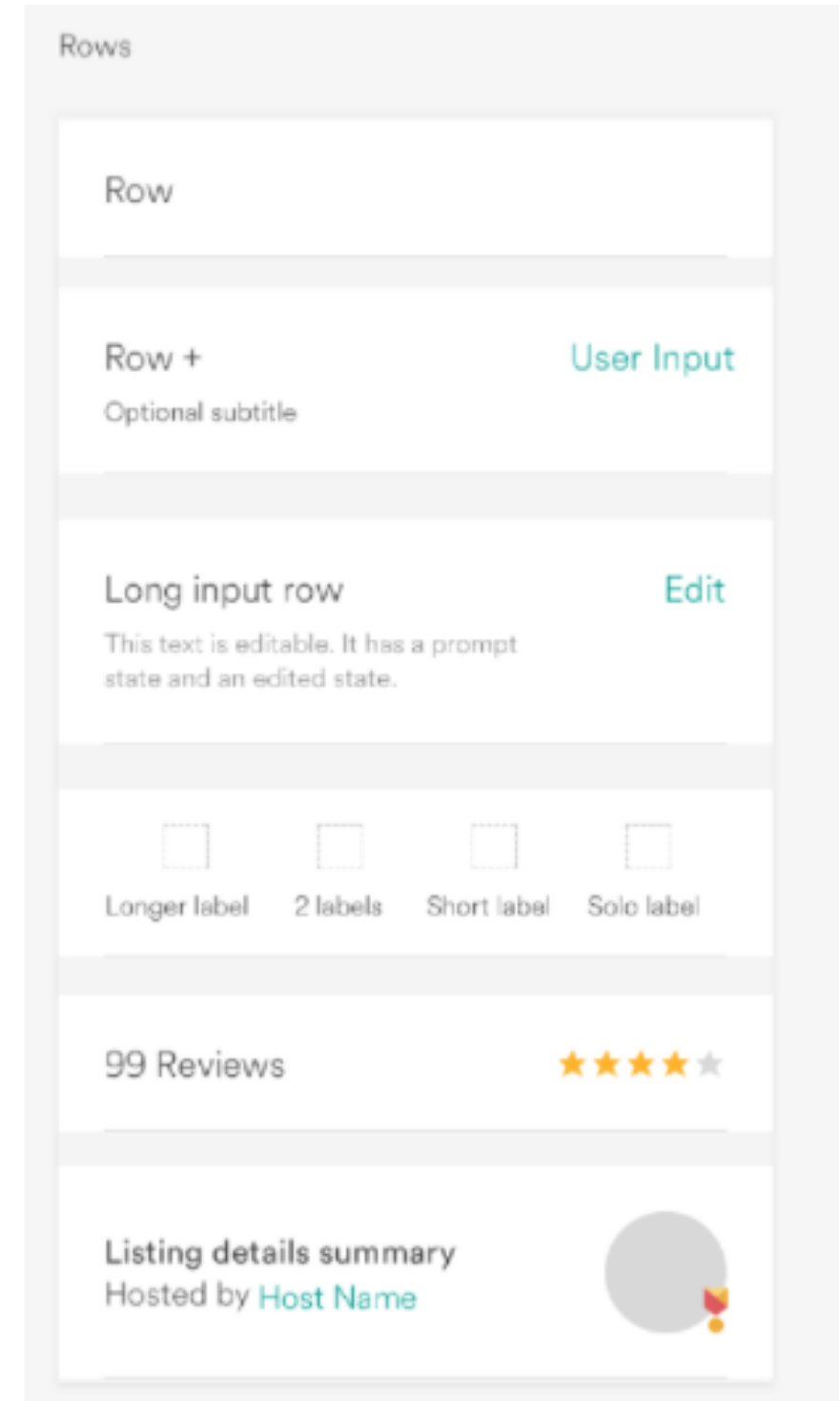
Design and Implementation of Software for the Web

Today

- What is a design language?
- Course evaluations.
- Next time: Final review

Design language

- Many, **many** choices about visual variables and syntax of composition
 - How do you ensure choices are made consistently across web app?
- Solution: design language
 - Describes how to express ideas and concepts in the interface
 - May be communicated through Human Interface Guideline documentation
 - (Example of consistency and standards)



Example: Elements, Google 2004

[Images](#) [Groups](#) [News](#) [Froogle](#) [All sizes - Large - Medium - Small](#) **view**

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[World »](#)  **Groups** **where**

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cmu [\[definition\]](#) **(0.48 seconds)** **1 - 37 of 37** **details**

4,285,199,774 web pages found 16 minutes ago

Reuters ©2004 Google Sponsored Links **fluff**

(Note: Setting preferences will)

[Graduating? Cor](#) [more »](#) [at CMU](#) [Inbox \(2\)](#) [Compose Mail](#)

action

[Invite 7 frie](#) [New Featu](#) [New!](#) Never lose a **act now**

Example: Syntax, Google 2004

task

Find results with **all** of the words
with the **exact phrase**
with **at least one** of
without the words

To:

Subject:

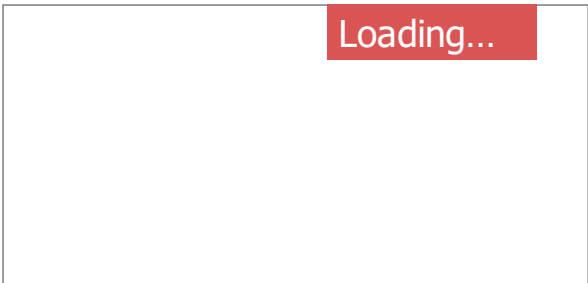
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Results Window ☐ C

placeholder



toolbar

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[Advanced](#) [Preferences](#)

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[Advanced News Search](#)

Search and browse 4,500 news sources updated continuously.

list

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- ☐ (unknown sender) (no subject) - Received: from ima
- ☐ Thomas LaToza » FW: Bb F04-17651: My apologies
- ☐ (unknown sender) (no subject) - Received: from ima



Carnegie Mellon University
Prospective Students Faculty Visitors Researchers General Visitors Corporate Visitors
Alumni Current Students Faculty & Staff Site Index Contact Us google, ...
[www.cmu.edu/](#) - 19k - Oct 18, 2004 - [Cached](#) - [Similar pages](#)

Central Michigan University
... For a more interactive version of the CMU home page, please enable JavaScript
in your browser window and reload this page. Otherwise ...
[www.cmich.edu/](#) - 90k - Oct 18, 2004 - [Cached](#) - [Similar pages](#)

Software Engineering Institute (SEI) Home Page
... services, courses, and events, contact Software Engineering Institute Carnegie Mellon
University Pittsburgh, PA 15213-3690 412-268-5900 [http://www.sei.cmu.edu/](#) ...
[www.sei.cmu.edu/](#) - 35k - Oct 18, 2004 - [Cached](#) - [Similar pages](#)

RhymeZone rhyming dictionary and thesaurus
RhymeZone. ...
[www.rhymezone.com/](#) - 10k - Oct 18, 2004 - [Cached](#) - [Similar pages](#)

SCHOOL OF COMPUTER SCIENCE/Carnegie Mellon University
... Hall Full SCS Calendar Submit an event! Seminar Series CMU Calendar Academic
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Welcome to Lycos!
Search: The Web Shopping News Pictures: People Search; Yellow Pages; Search
Advertising: Advanced Search: Fun Search: Cast Instant Love ...
[lycos.cs.cmu.edu/](#) - 19k - Oct 18, 2004 - [Cached](#) - [Similar pages](#)

The Robotics Institute
... RI Seminar Navlab Core Technologies Jay Gowdy & Rob MacLachlan, SAIC & CMU, Oct
15 2004, 3:30 PM, NSH 1305. ... This page maintained by [robotwebmaster@ri.cmu.edu](#).
[www.ri.cmu.edu/](#) - 46k - Oct 18, 2004 - [Cached](#) - [Similar pages](#)

Collegiate Readership Program initiated at CMU
The Tartan, PA - Oct 18, 2004
by Louisa Kinosh. Carnegie Mellon is currently sponsoring a free one-month trial of the USA Today
Collegiate Readership ...
[John Kerry Condoleezza Rice to appear on campus](#) The Tartan
[From the desk: Student government always seeks to respond to veg](#) The Tartan
[all 2 related »](#)

Huskie tailback Wolfe darts to second MAC Player of the Week title
Dekalb Daily Chronicle, IL - 11 hours ago
... Central Michigan. "The offensive line and our tight ends did a great job (blocking)," Wolfe said after the CMU
game. "They make my life easier." ...
[Wolfe runs away with MAC POW award](#) Northern Star Online
[An all-access pass to the NIU locker room](#) Northern Star Online
[Northern Illinois pounds CMU 42-10](#) OutHines.com
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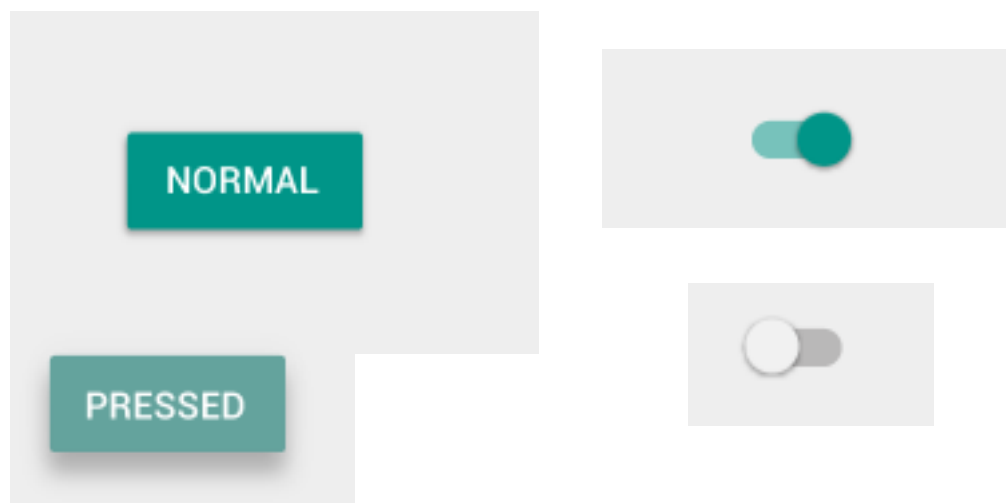
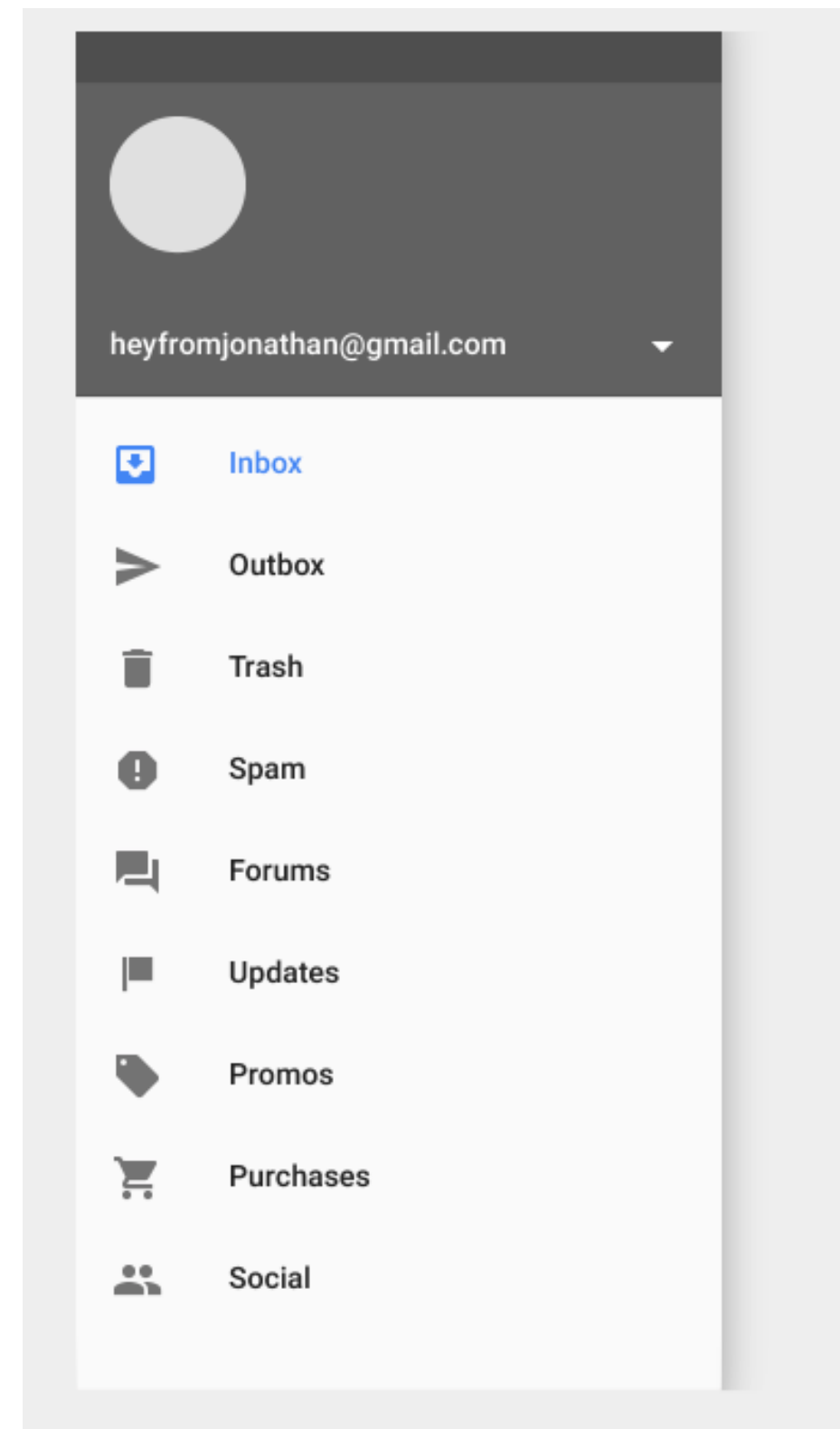
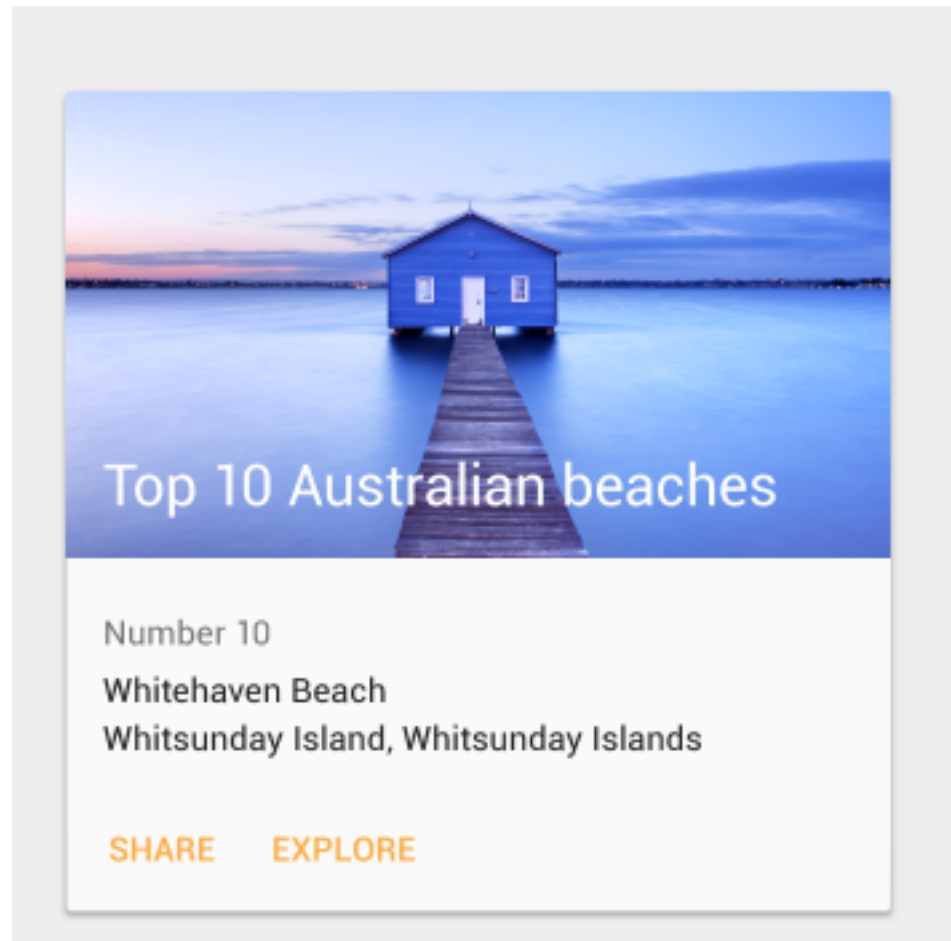
CMU students prepare for Solar Decathlon
The Tartan, PA - Oct 18, 2004
by Ann Wootton. Carnegie Mellon students are leading the Pittsburgh Synergy team designing and building a
solar house ...
[Fringe turns on the heat at the Chili Cook-off](#) The Carnegie Pulse
[all 2 related »](#)

Rockstar to Rally for Kerry at CMU
KDKA, PA - Oct 18, 2004
Pittsburgh (KDKA) For the second time in six months, singer Jon Bon Jovi will perform in Pittsburgh for a political cause. The
New ...

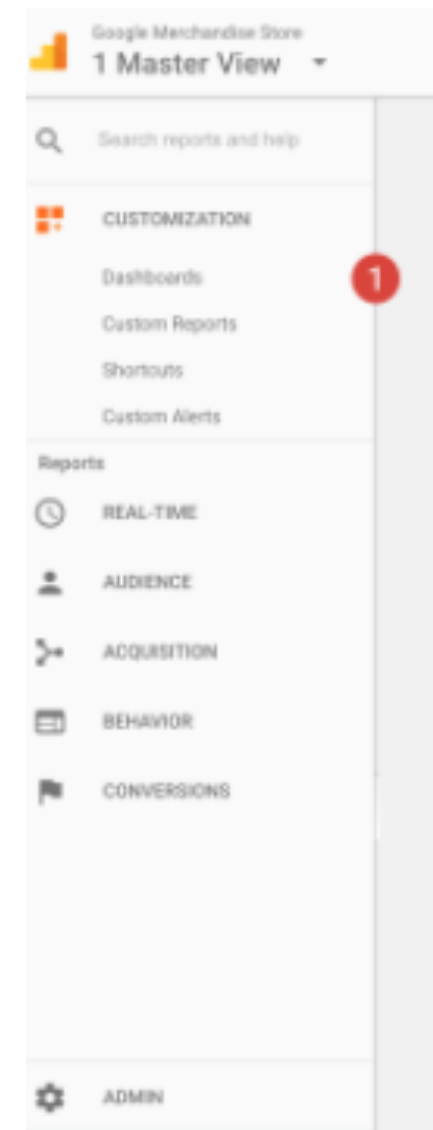
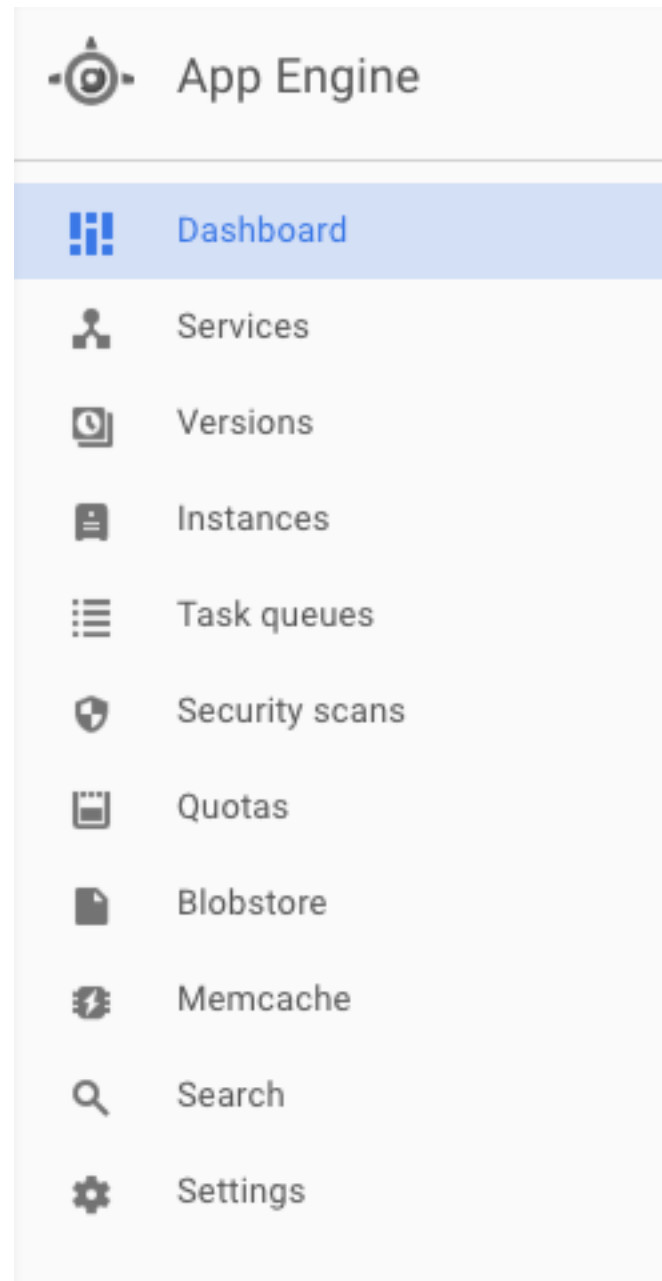
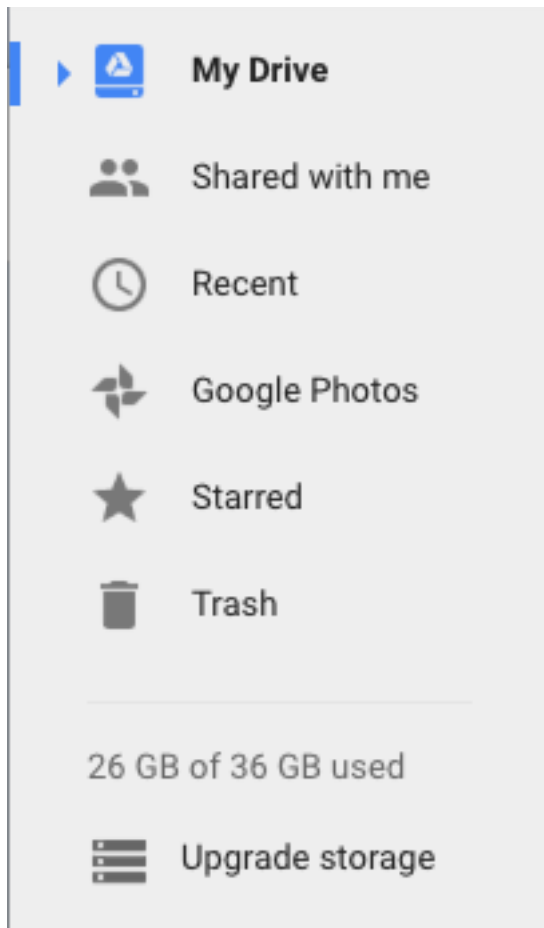
Video From The CMU Robotics Institute Showcase
Slashdot - Oct 18, 2004
mpost4 writes "This last week the CMU Robotics Institute showed off some of the stuff they were doing. They were showing the
new stuff they were working on ...

Northern Illinois Rolls by CMU 42-10
Gohard.com - Oct 18, 2004
... The win dropped CMU's record to 2-4 for the season and 1-2 in MAC action. NIU is now 4-0 in the league and

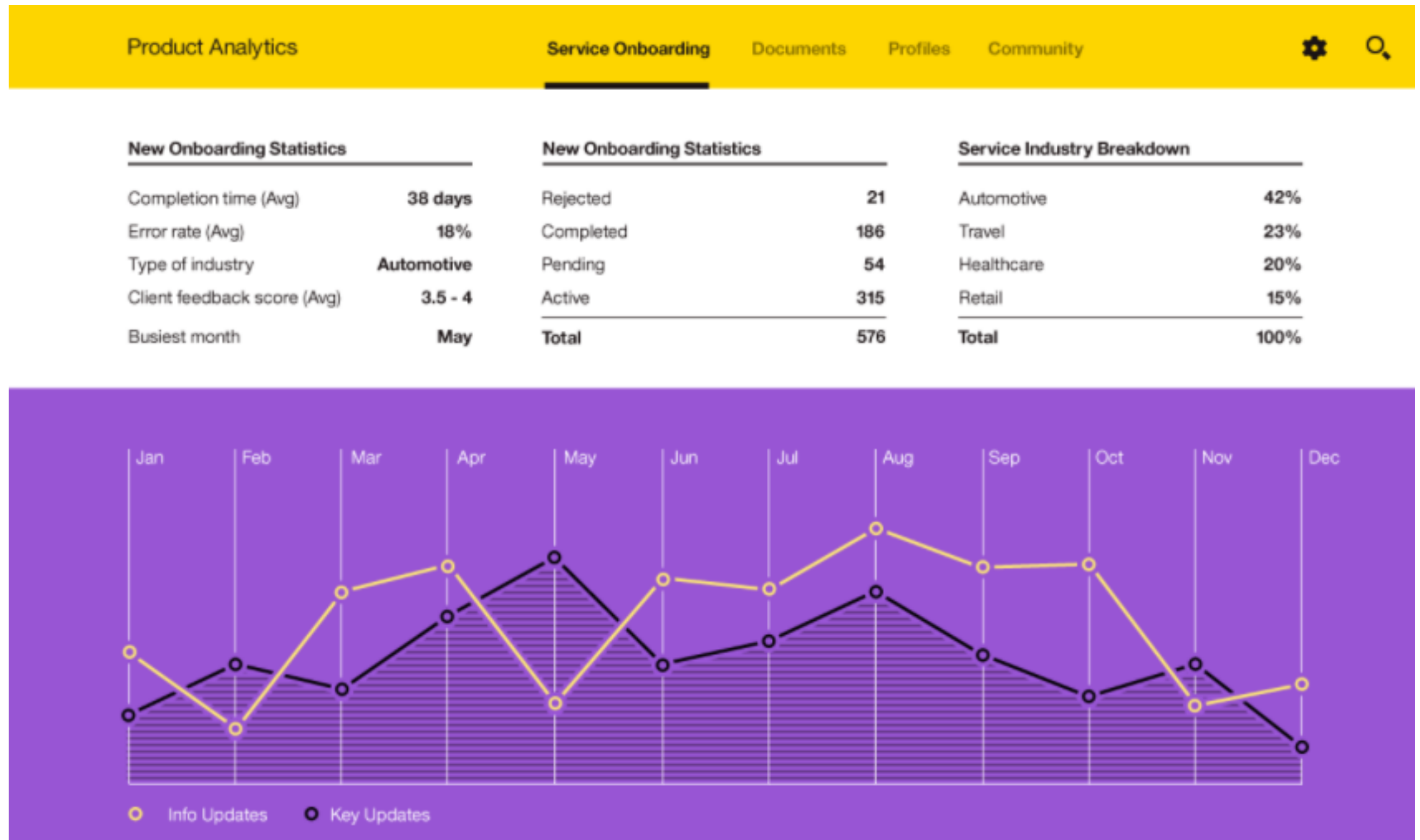
Examples: Google 2016



Examples: Google 2016



Examples: IBM



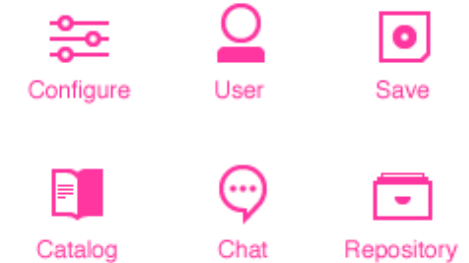
Examples: IBM



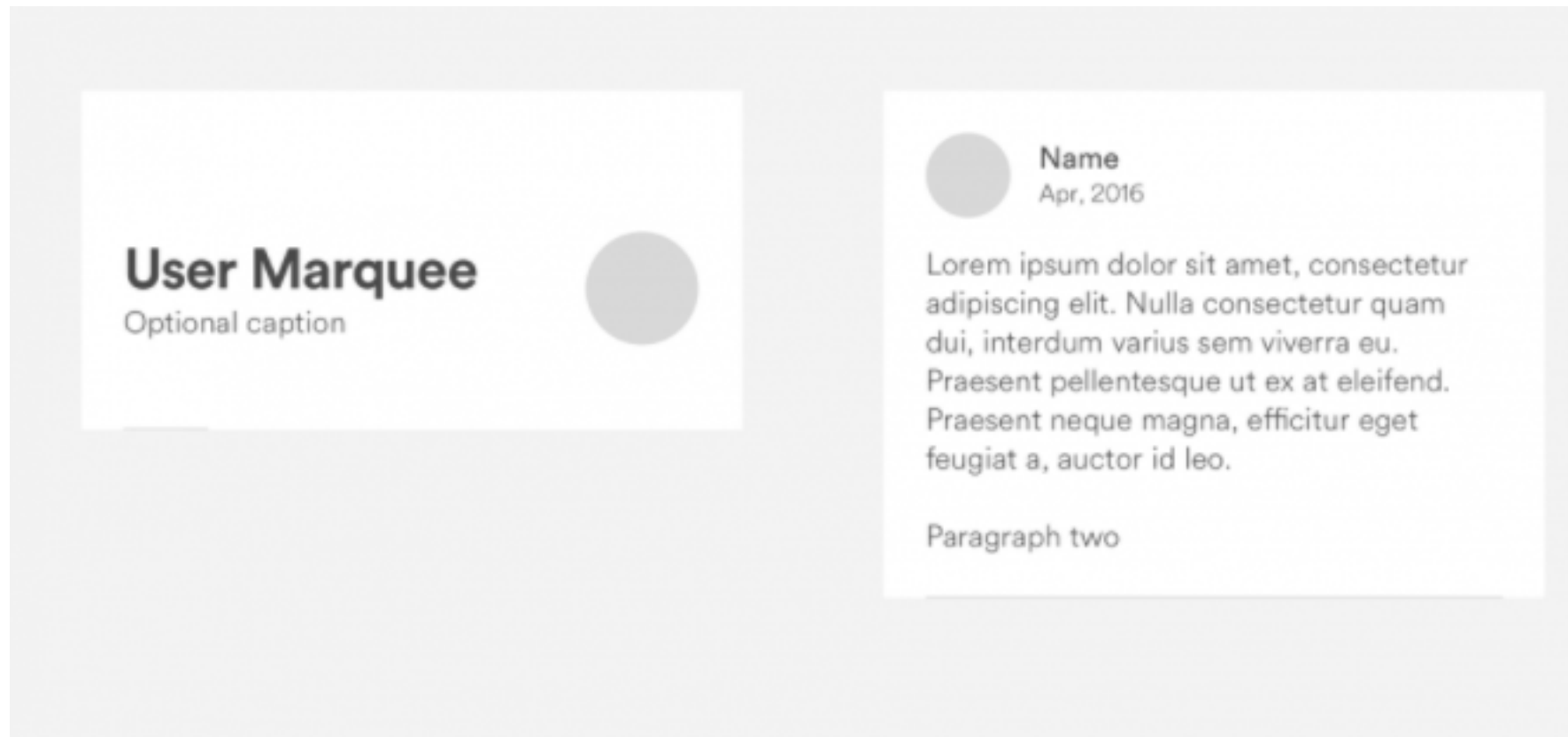
Examples: IBM

Application data

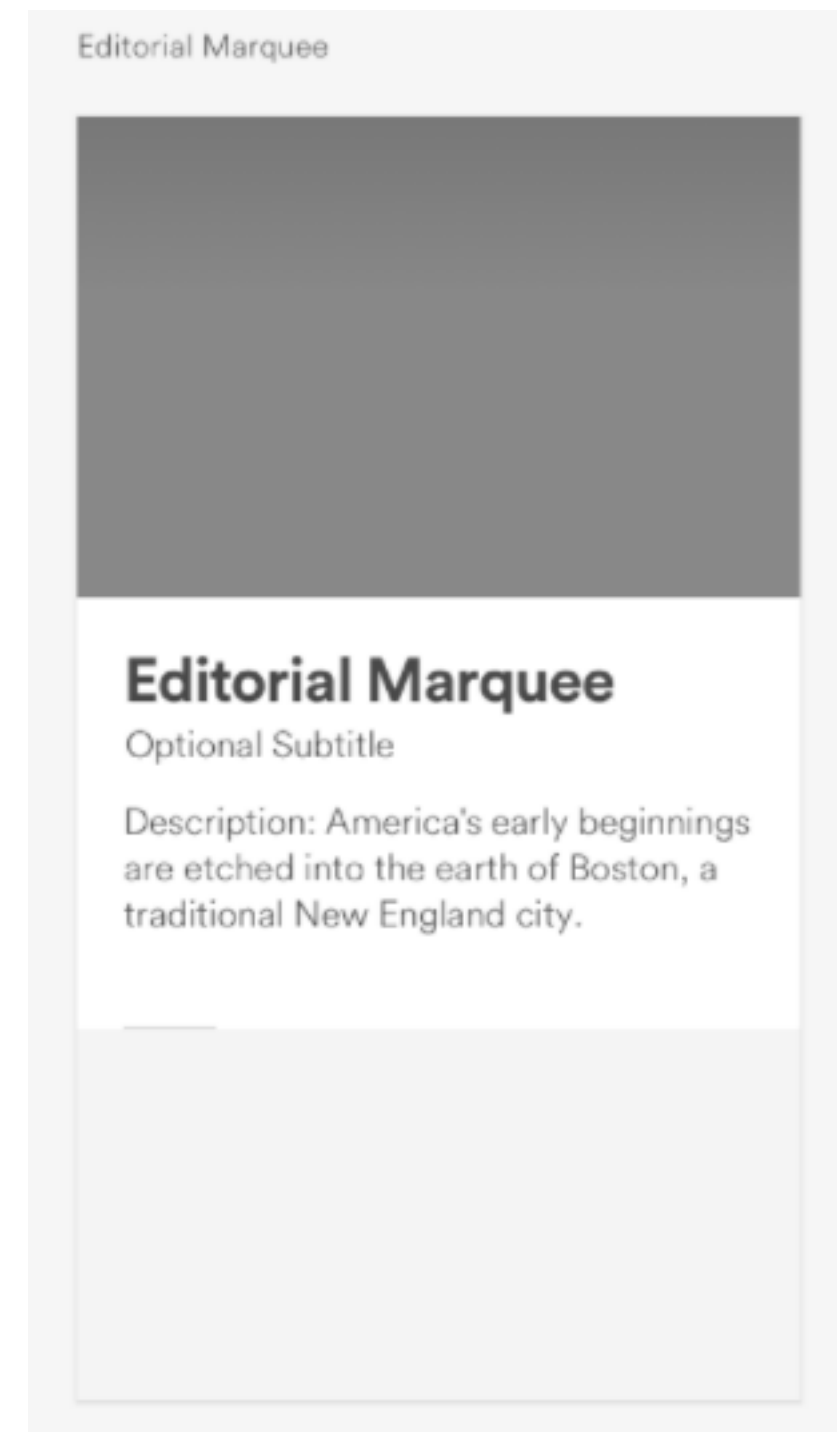
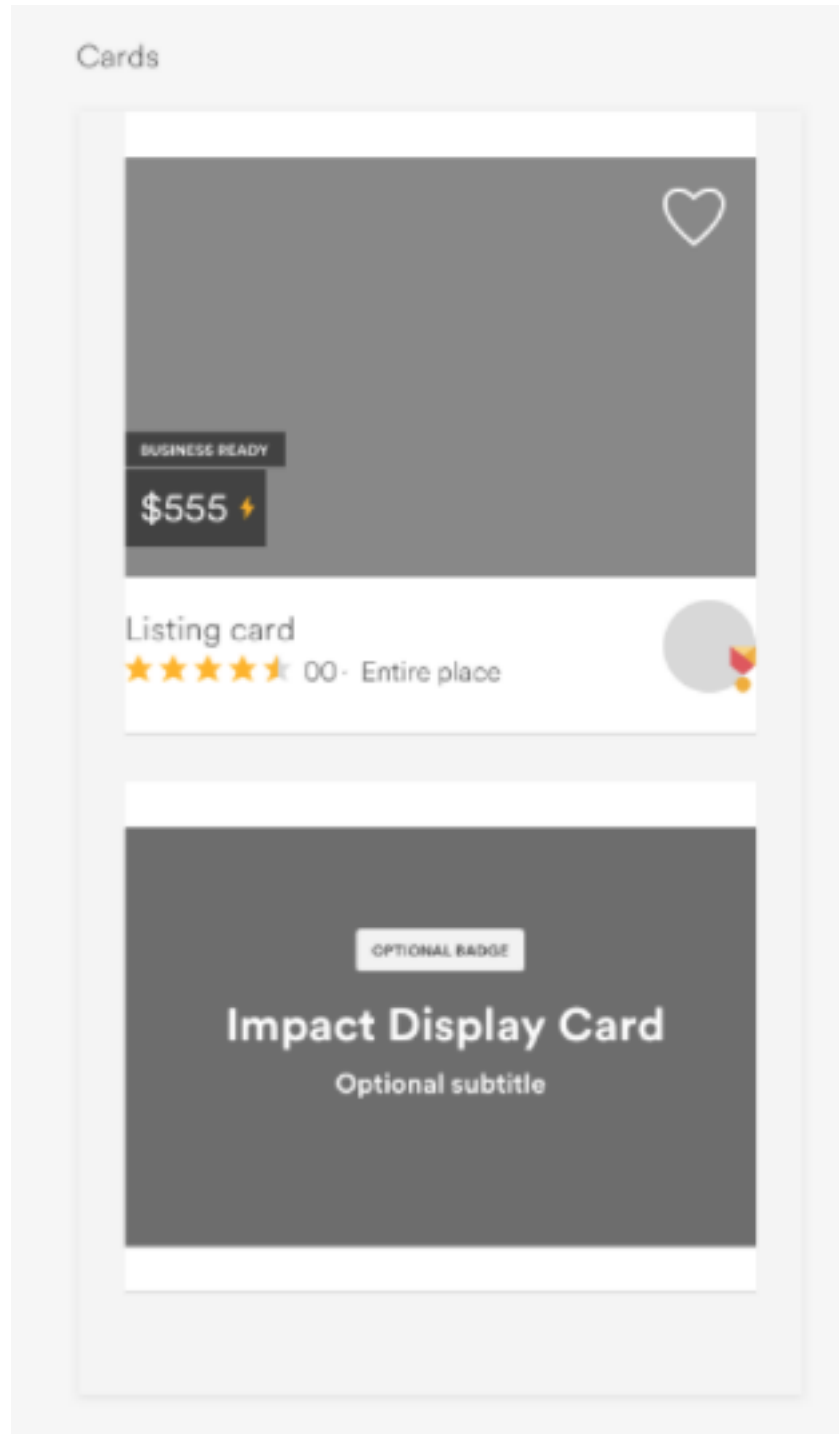
| Title | Title | Value | Date ▼ | Value |
|-----------------|-------|-----------|--------------|-----------|
| Imperial | true | 9 456 234 | 21. Feb 2014 | 9 456 234 |
| Hard | false | 987 345 | 21. Feb 2014 | 987 345 |
| Cider | false | 43 567 | 21. Feb 2014 | 43 567 |
| Anaerobic | true | 324 543 | 21. Feb 2014 | 324 543 |
| Cold filter | false | 432 456 | 20. Feb 2014 | 432 456 |
| Barrel hand | true | 32 432 | 20. Feb 2014 | 32 432 |
| Pump wort | true | 4 567 | 20. Feb 2014 | 4 567 |
| Dry hopping | false | 34 567 | 20. Feb 2014 | 34 567 |
| Carbonation | true | 434 567 | 20. Feb 2014 | 434 567 |
| Mash tun | false | 9 456 234 | 20. Feb 2014 | 9 456 234 |
| Bittering hops | true | 987 345 | 20. Feb 2014 | 987 345 |
| Heat exchanger | false | 43 567 | 19. Feb 2014 | 43 567 |
| Lauter aerobic | false | 324 543 | 19. Feb 2014 | 324 543 |
| Abbey seidel | true | 432 456 | 19. Feb 2014 | 432 456 |
| Brewhouse | false | 32 432 | 19. Feb 2014 | 32 432 |
| Brewpub adjunct | true | 4 567 | 19. Feb 2014 | 4 567 |
| Dextrin seidel | true | 34 567 | 19. Feb 2014 | 34 567 |
| Aau beer | false | 434 567 | 19. Feb 2014 | 434 567 |
| Krug abv | true | 434 | 19. Feb 2014 | 434 |



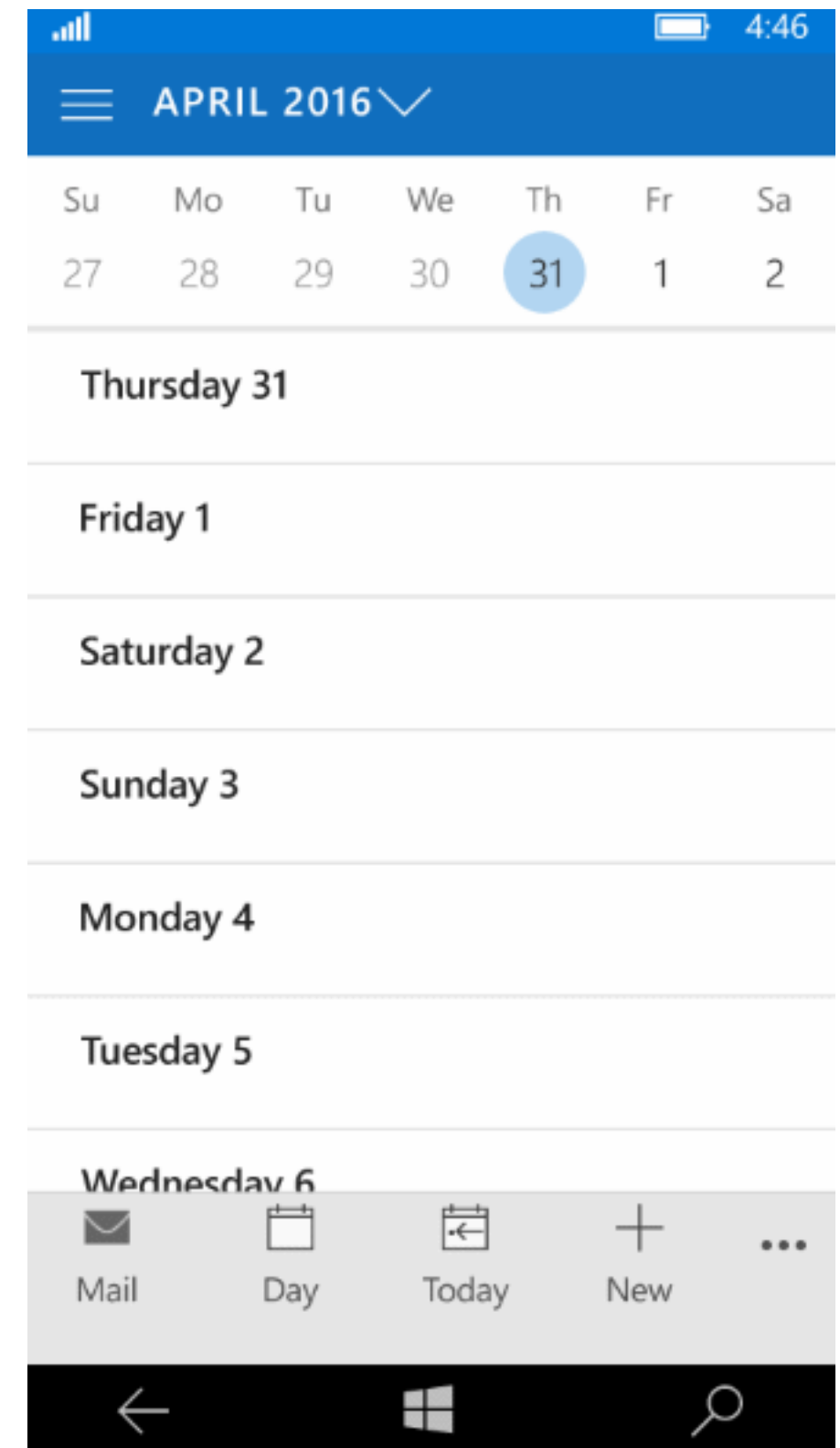
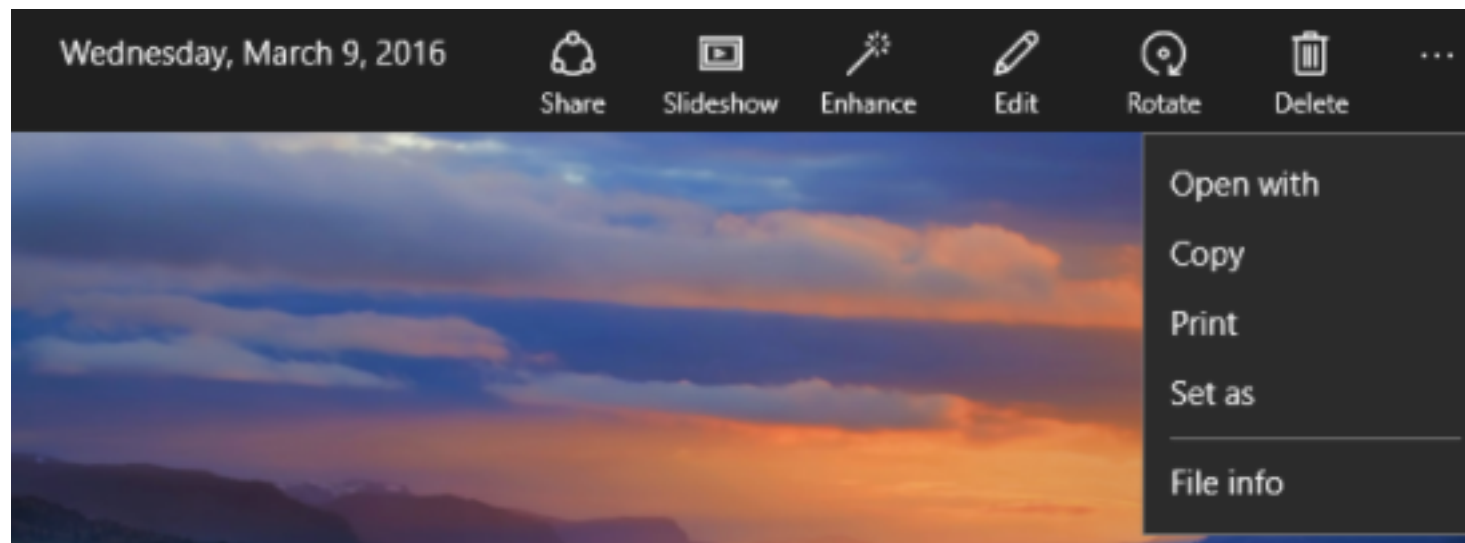
Examples: AirBnb



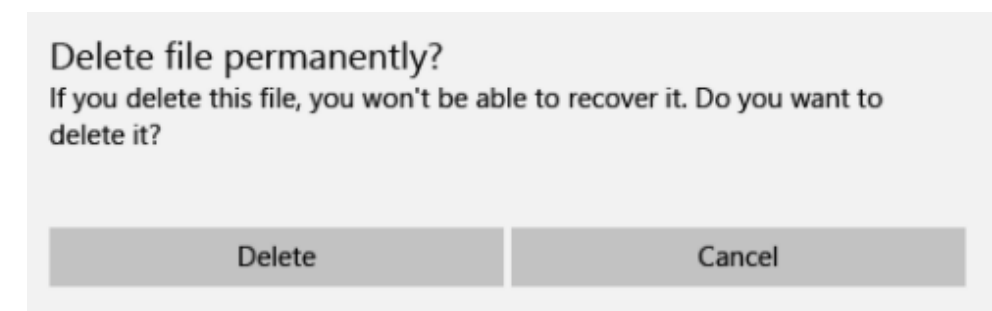
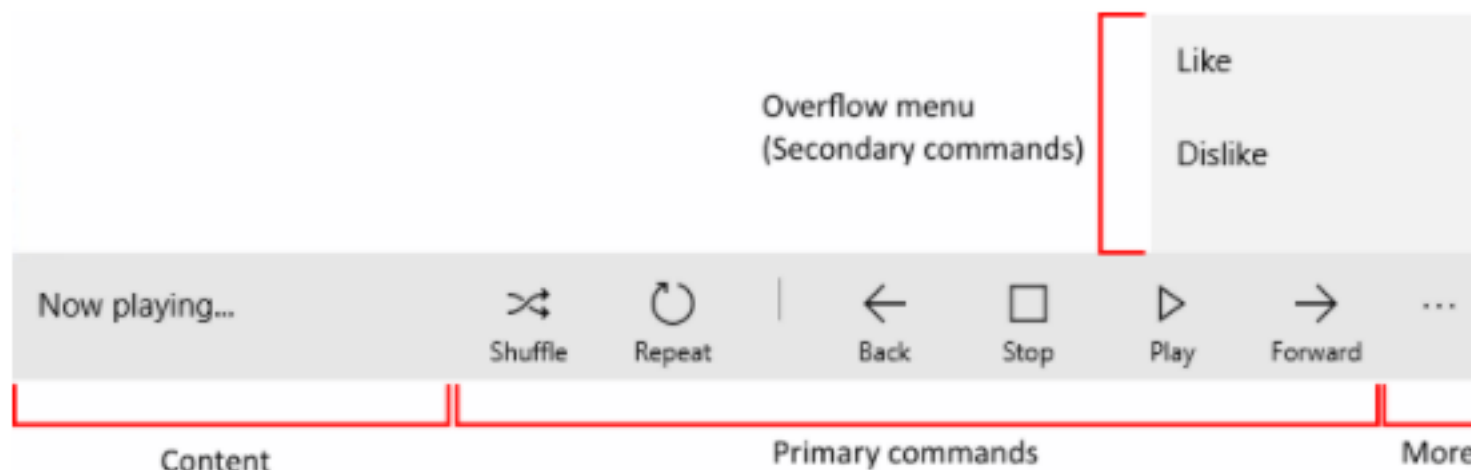
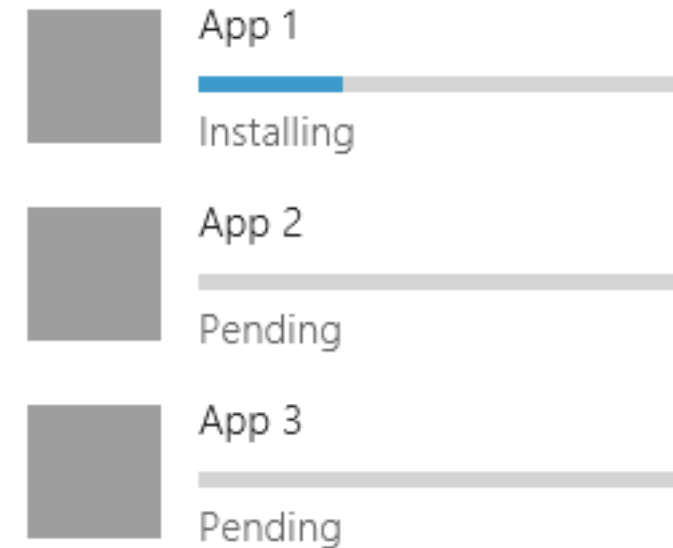
Examples: AirBnb



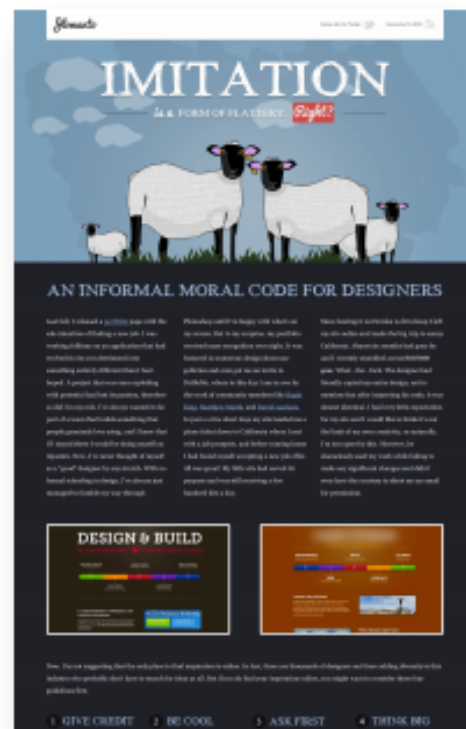
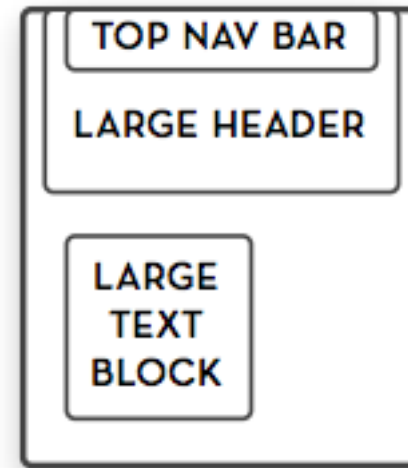
Examples: Microsoft



Examples: Microsoft



Example: Header with text blocks layout



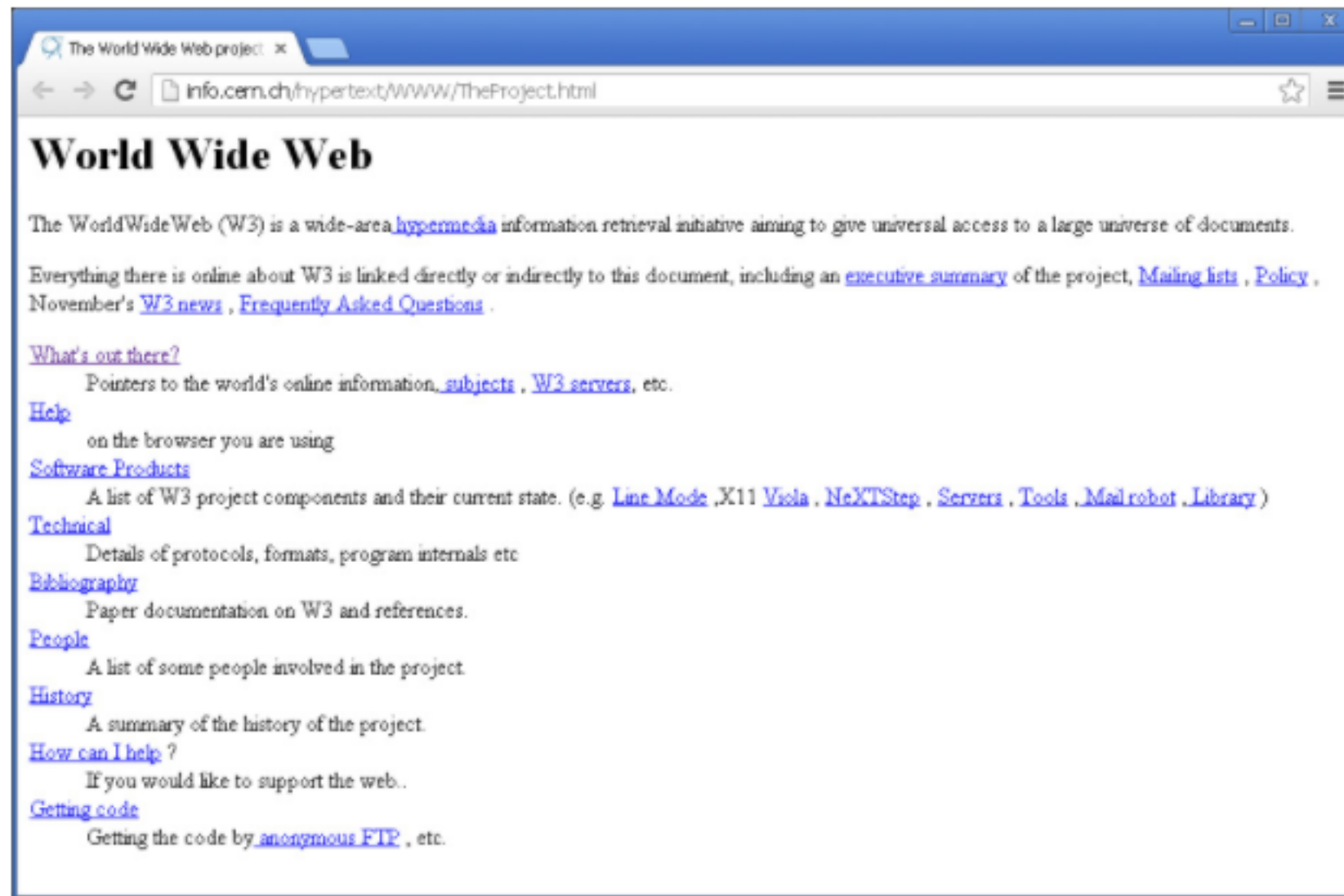
From: <http://ranjithakumar.net/resources/webzeitgeist.pdf>

Elements strongly associated with position



From: <http://ranjithakumar.net/resources/webzeitgeist.pdf>

Web design languages over time



<https://blog.hubspot.com/marketing/look-back-20-years-website-design#sm.00000ip14jejk1d51u53crk6cwrns>

Web design languages over time



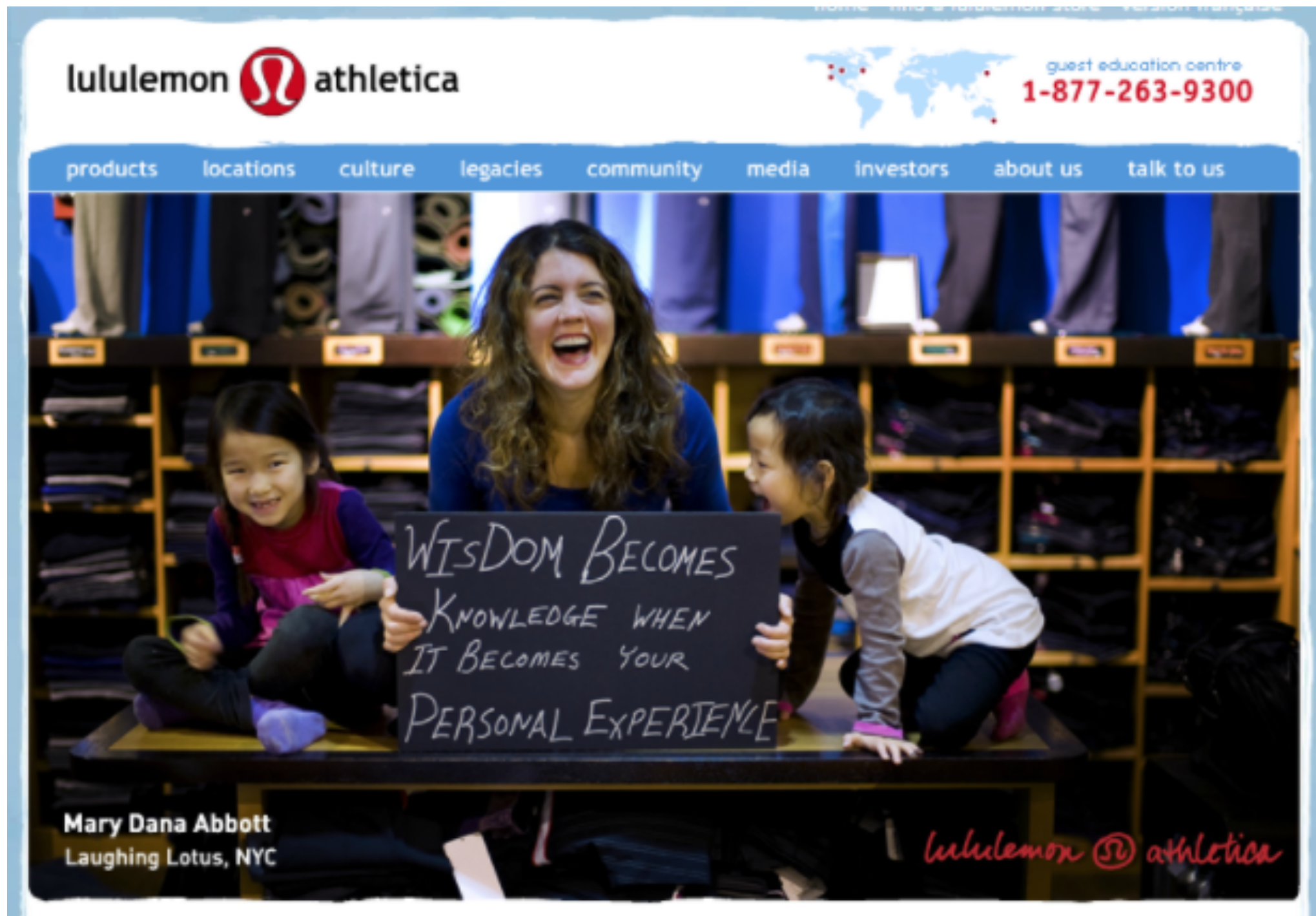
Web design languages over time



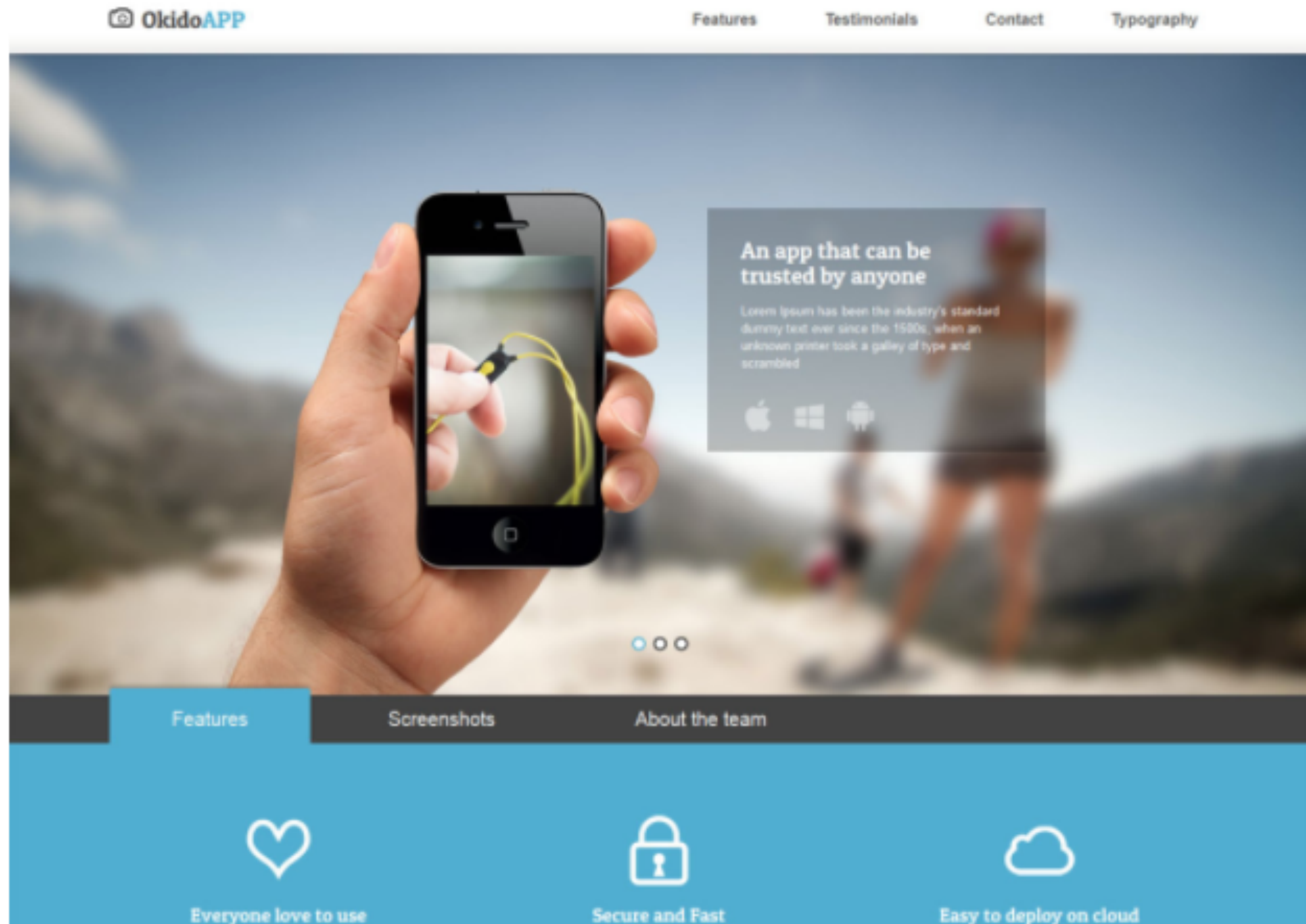
Web design languages over time



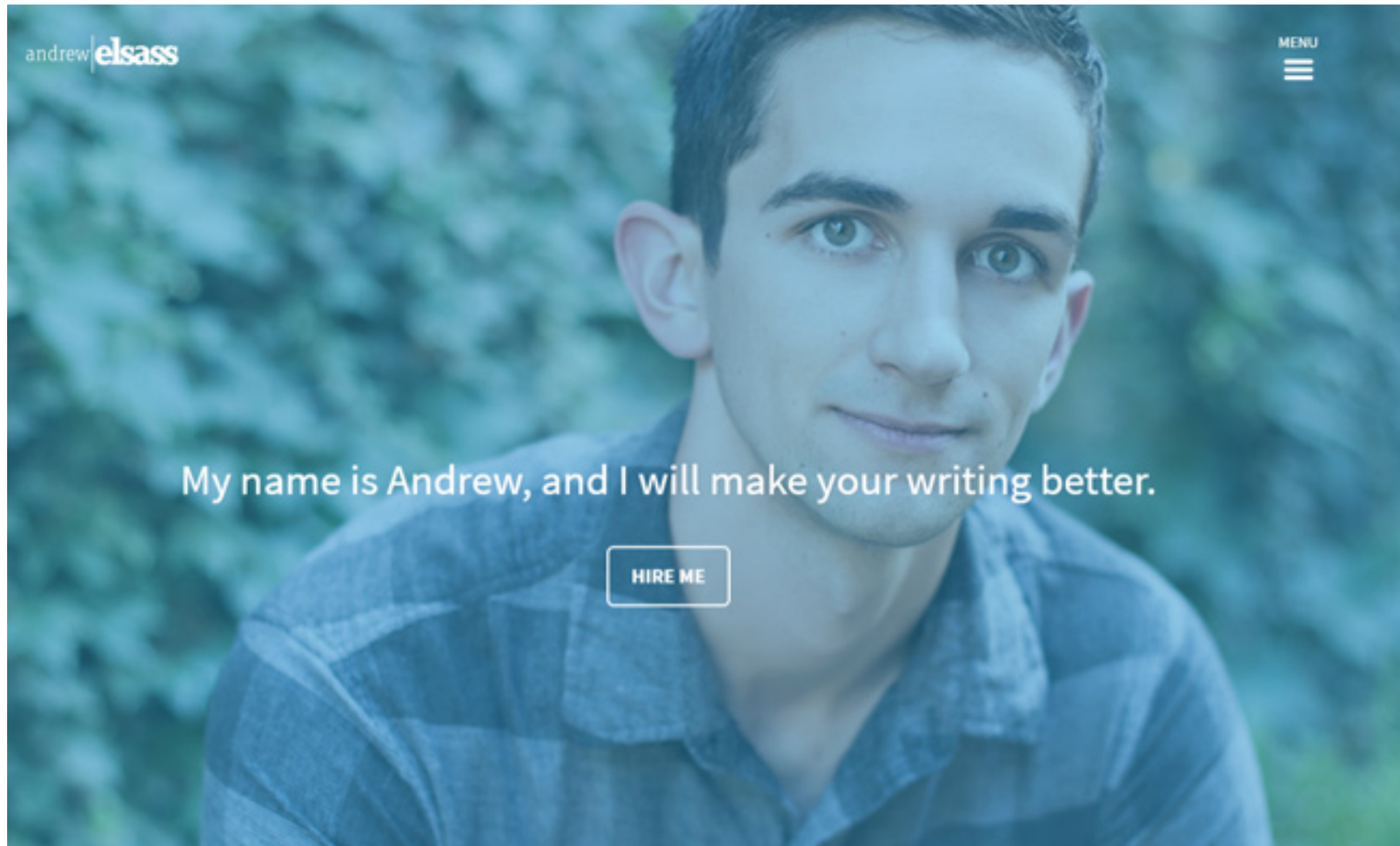
Web design languages over time



Web design languages over time

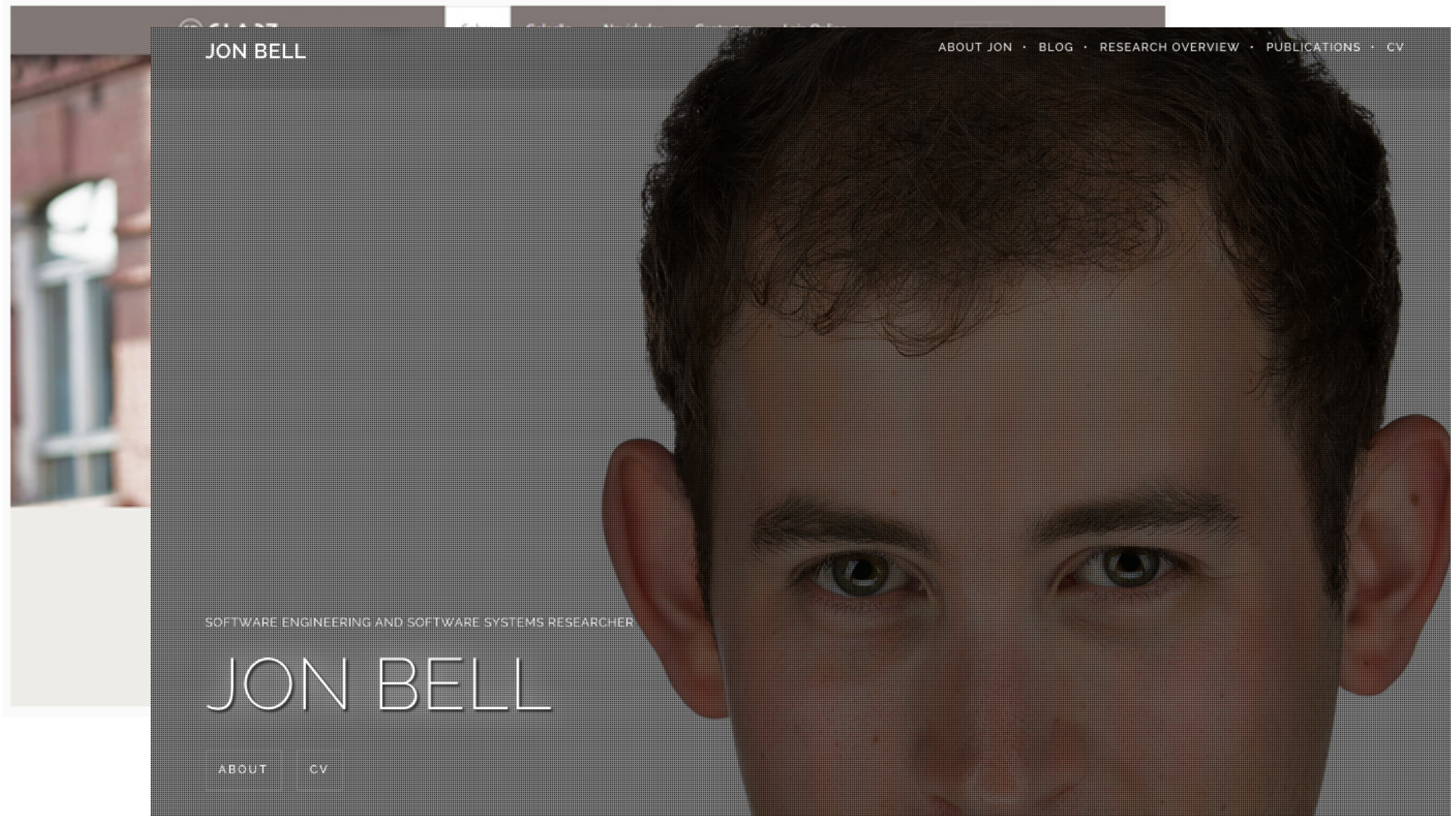


Common visual idioms, circa 2016



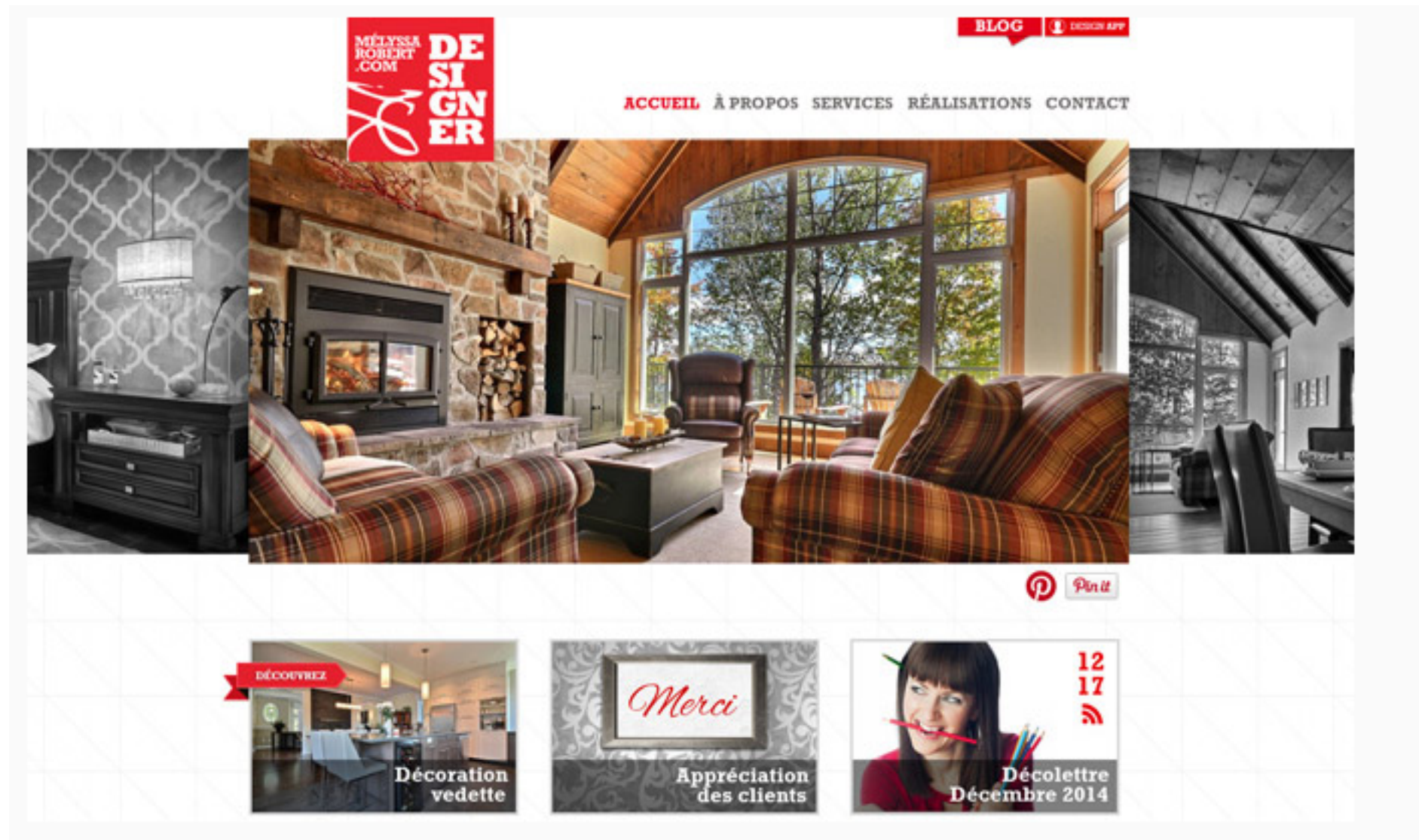
- Hero images: large attractive header image
- <https://envato.com/blog/exploring-hero-image-trend-web-design/>

Common visual idioms, circa 2016



- Single page designs: hero image with a navbar
- <https://envato.com/blog/exploring-hero-image-trend-web-design/>

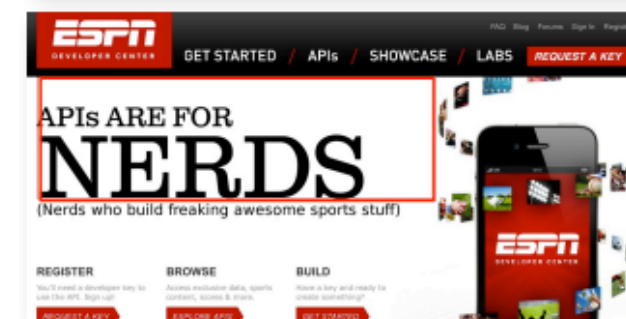
Common visual idioms, circa 2016



- Rotating image galleries (carousels)
- <https://envato.com/blog/exploring-hero-image-trend-web-design/>

Why it matters

- Users will have idioms they expect to see, particularly if suggested by other related elements
- Branding: Users will see your website and have particular associations based on what it exemplifies



Goals in designing a design language

- Offer guidance and options on
 - Colors: examples of color palettes
 - Typography: justification, sizes, fonts, different heading levels
 - Organization
- Support different resolutions, devices

Activity: Identify Design Language

- In groups of two or three:
 - Pick a website.
 - Identify key design language elements.
 - For each element you identify
 - What differentiates its appearance?
 - What does its appearance mean?
 - In what situations can it be used?

Design Critiques

- Opportunity to offer **feedback** on interaction designs
- Often done in group context, where many will offer feedback together
- Important to offer feedback **constructively**
 - Critique the design ideas, not the designers
- Important to consider who is the user, what are their goals, and in what ways does the web app help (or not help) in accomplishing these goals
- Can use full range of interaction design principles
 - Heuristic evaluation, interaction techniques, site design, visual design, ...

Activity: Design Critique

- Form groups of two or three where each member is from a **different project group**
- Take turns. For each web app you have built
 - Bring up and demo the web app. Let group members try it.
 - Critique the interaction design, identifying positive elements and potential ideas for improvement.

Discussion of course structure

- Open ended assignments vs. canned programming assignments?
- Project split into 11 assignments vs fewer bigger deadlines?
- Teams vs. individual assignments?
- Pacing of assignments and lectures. Topics that were too fast or too slow?