

CS377Q: Today's goals

- User study tips
- Reminder on color
- Accessibility in industry panel
- P4b due on Tuesday
 - (5 min. consultation on your user study data)



Augmenting Reality for People with Low Vision

- **Prof. Shiri Azenkot** of Cornell Tech
- **Friday May 24th at 10am**
- **Studio 1, d.school (2nd floor)**
- Research on designing augmented reality applications for people with low vision; two augmented reality applications for buying a product at a store and walking in the built environment



User study reminders

Especially with small sample size and users with diverse needs

- Beware of too much hand-holding, coaching
 - Let them struggle with the interface, don't offer hints too quickly
 - Watch out for helping reflex
- Probe about novelty effect
 - People can be optimistic about new things
 - You're seeing this for the first time—what do you think would be most useful in the long run?
- Enlist them to get beyond confirmation bias
 - Ask questions that help you see and understand things that aren't working
 - Most helpful when they can point out things to improve

User study measures

- Time to completion
 - Noisy signal for first-time impressions
- Number of errors
 - Also noisy signal for first-time impressions
- Quantitative measures are attractive because they're easy to measure
- Qualitative measures are more helpful at this stage and scale
 - Likert scale questions are a middle ground
- Complement quantitative with qualitative measures

P4 tips

- Gratuity
 - Consider what would be useful to participant
 - Amazon electronic gift cards of any \$ amount are easy to send via email:
<https://www.amazon.com/> search for “eGift card”
- Data recording
 - Use phone to record user study
 - Delete data after done with this class/project
- Timing
 - Presentations have been running long
 - Time limits will be strictly enforced

Small user populations

- Look for correlations
 - Pay attention to specific user context
- Explore unexpected explanations of the data
 - Is that the only possible explanation?
- Compare perceptions among team members (intersubjective knowledge)
- Confirm understanding with participants (followup)
- Beyond class scope
 - Recruit more participants
 - Augment with larger scale survey

Qualitative data analysis







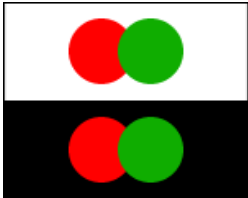




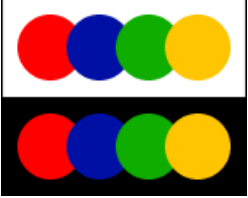
- Field notes during study
- Review recordings
- Transcribe data
 - <https://www.rev.com/>
 - <https://otter.ai/login>
- Salient quotes
- Recurring themes

The Basics of the Color Wheel

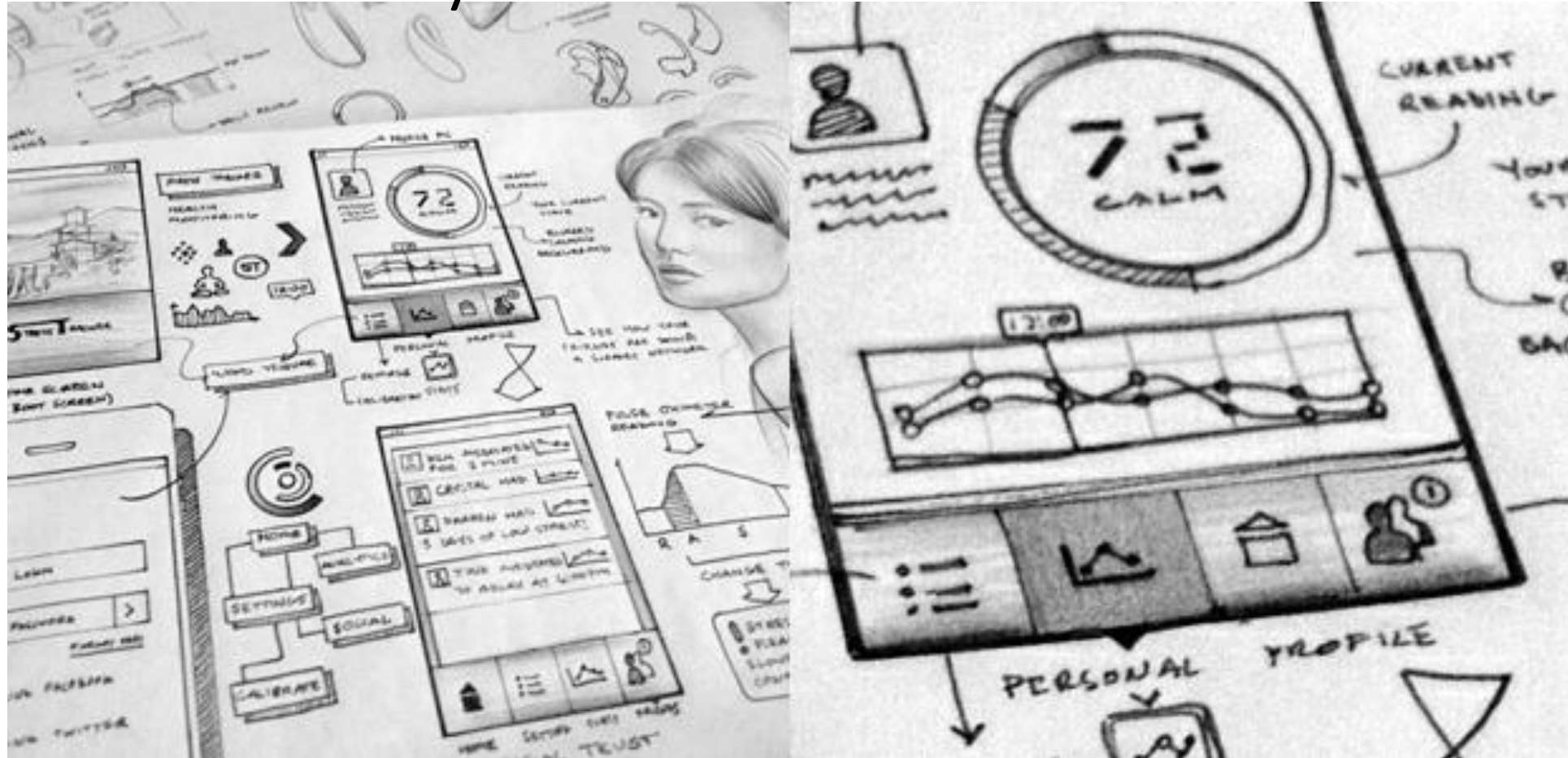


Using Appropriate Color “Harmonies”



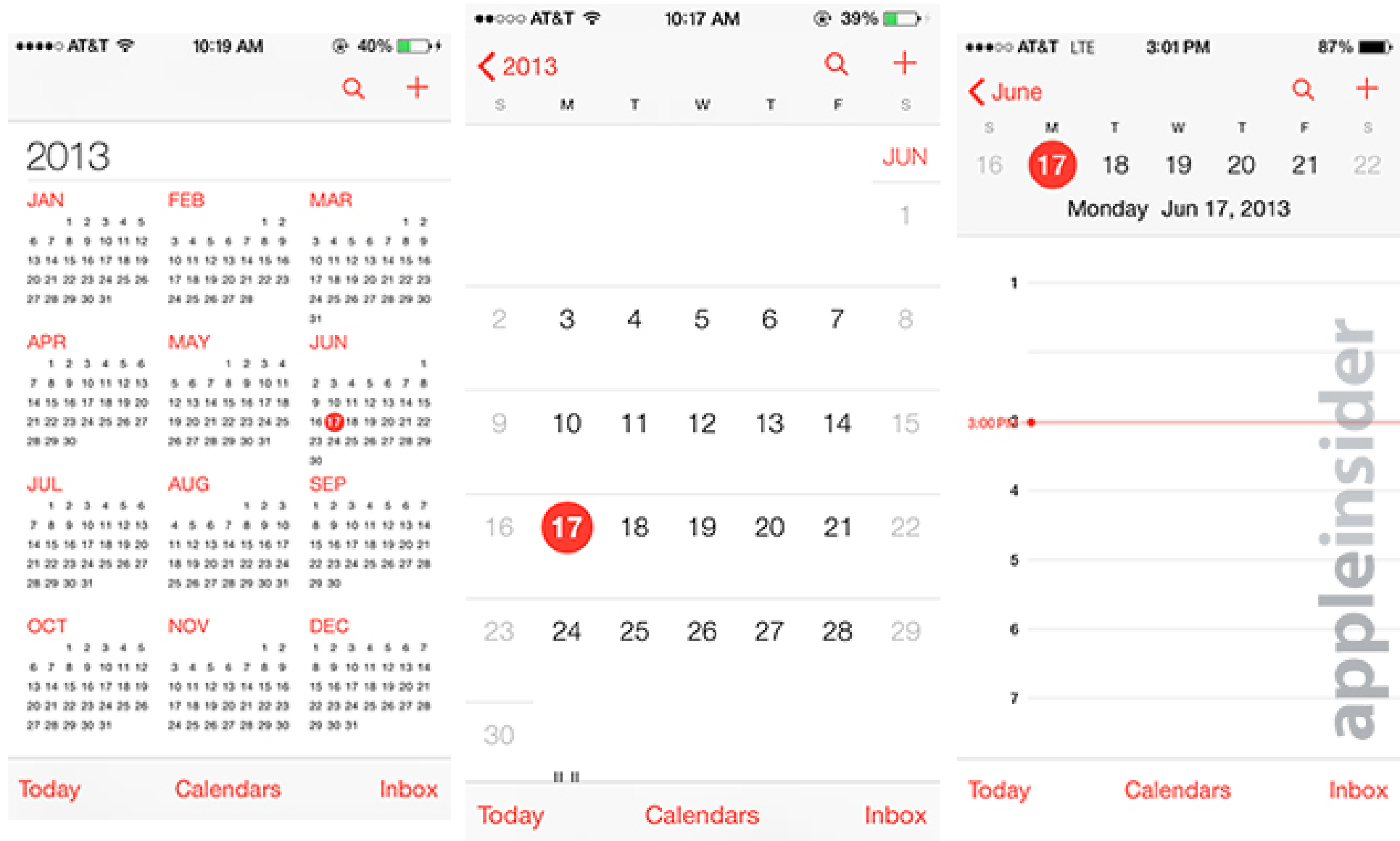
Complementary	Analogous	Triad	Split Complementary	(Tetradic)	Square
					
					

Start with Greyscale

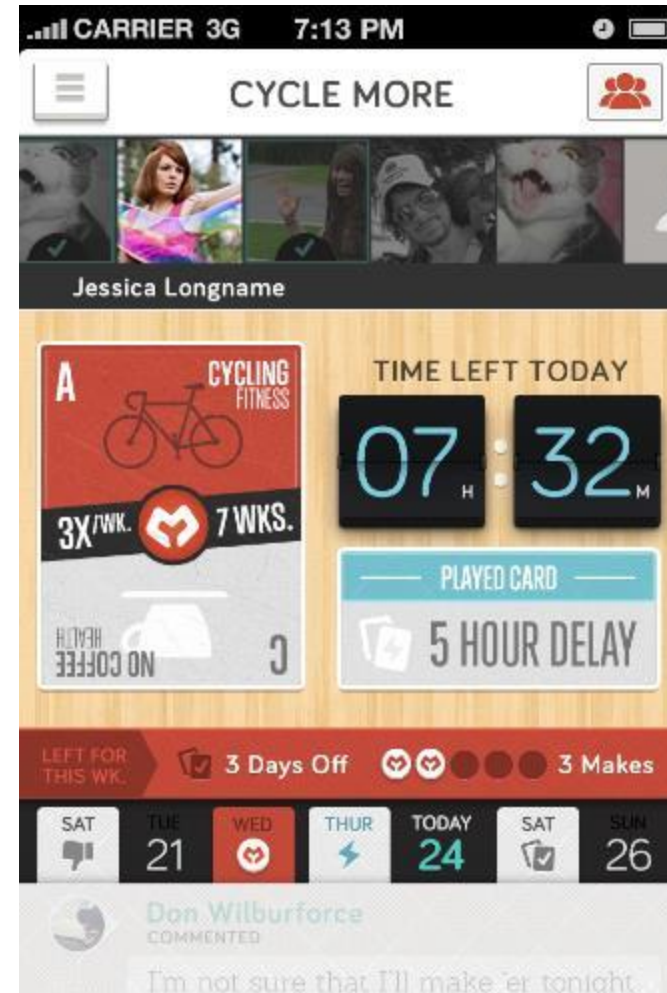
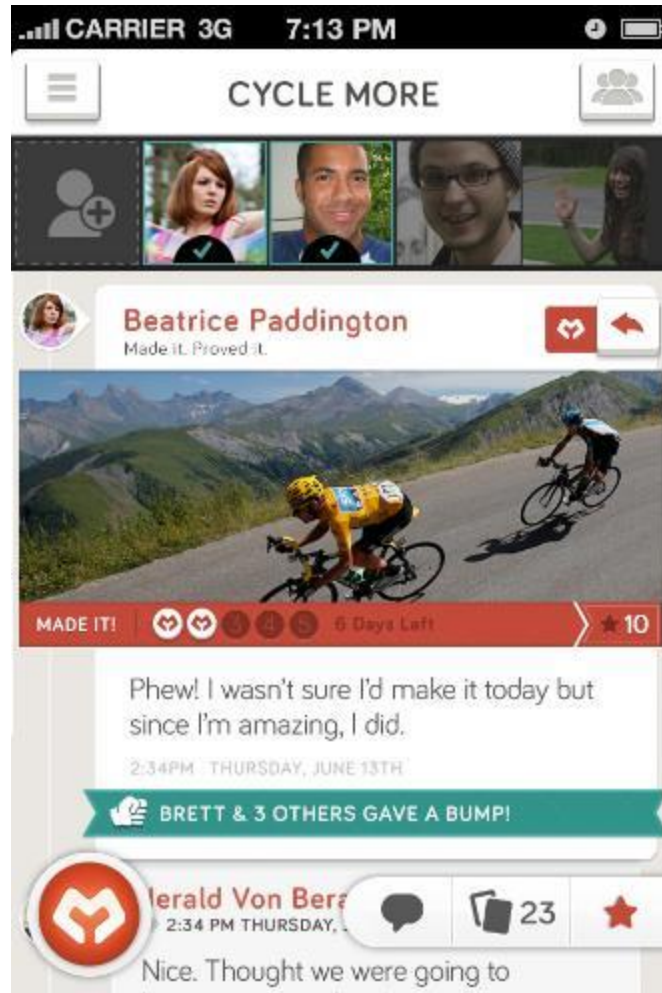


... then *accent* or *enhance* with color

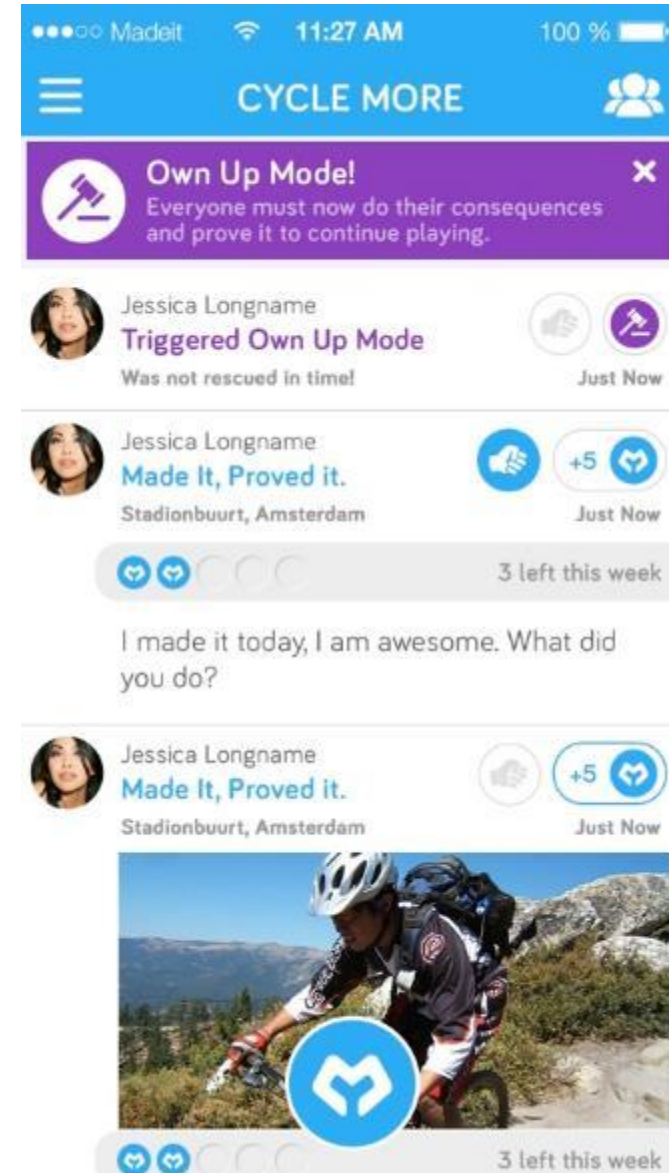
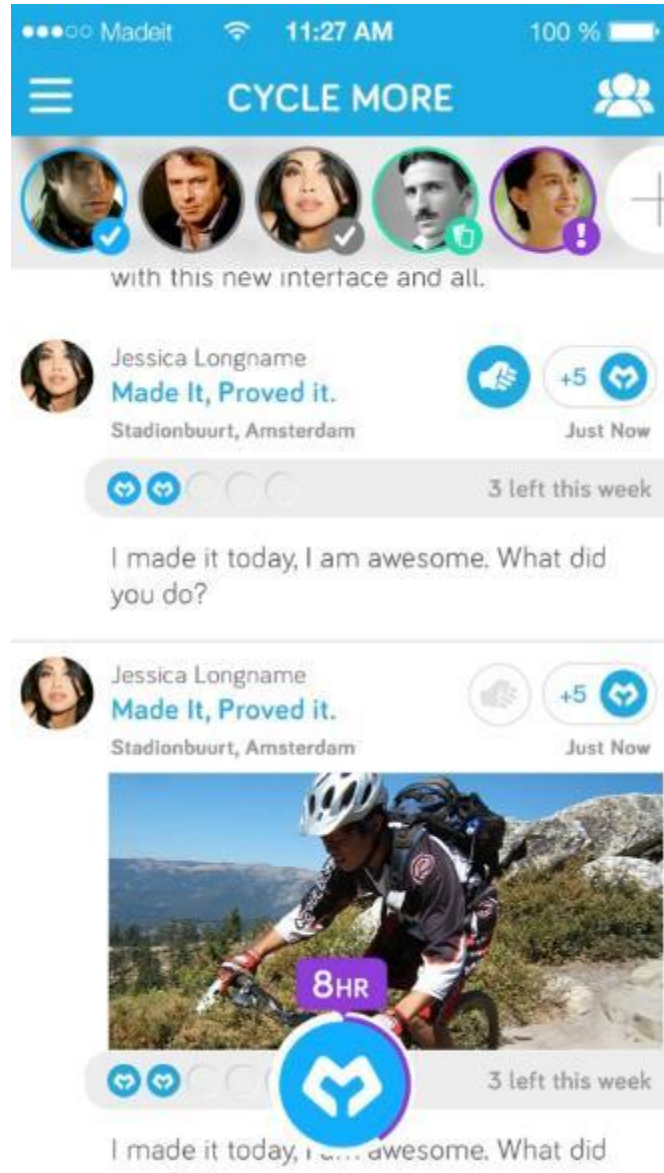
Action + Passive Colors

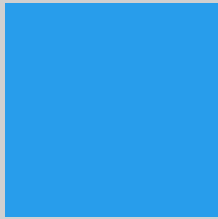


Poor Use of Color

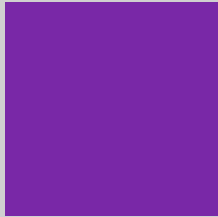


Redesigned to Use 3 Actionable Colors





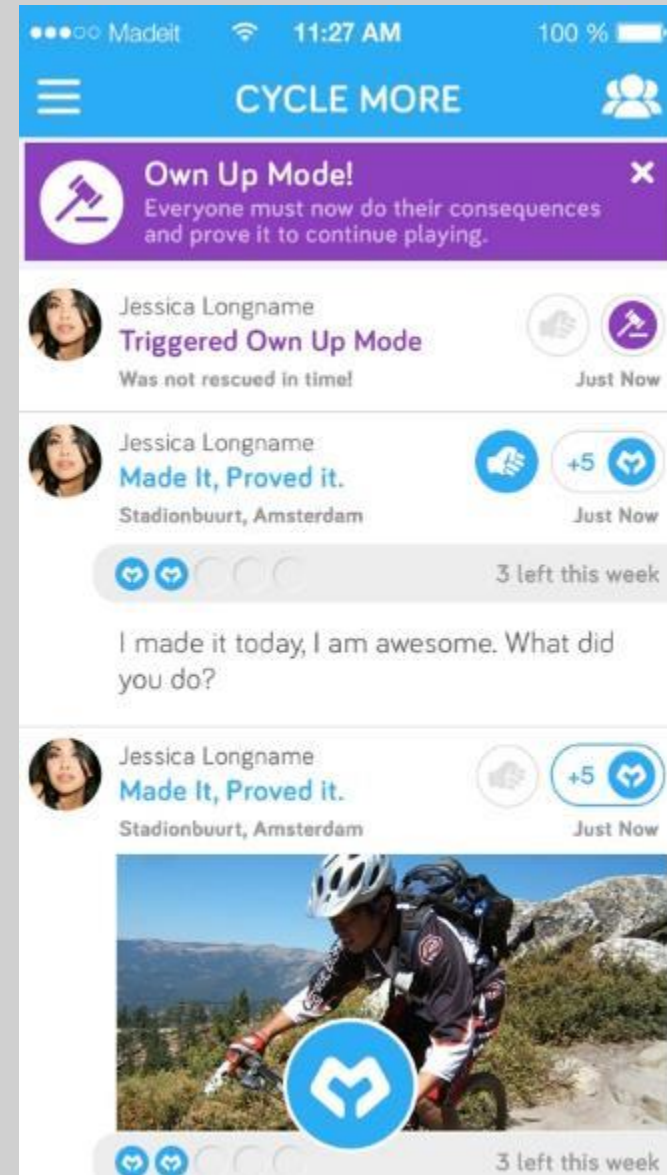
Action



Immediate



Analogous



Tools that help with color selection

- <http://colorschemedesigner.com/>
- <http://kuler.adobe.com/>
- <http://colorbrewer2.org/>
- <http://www.colourlovers.com>

Color design tools

- Color contrast analysers
- <https://www.digitala11y.com/color-contrast-analyzers-checkers/>

Color blind checker

- <https://www.color-blindness.com/coblis-color-blindness-simulator/>



The screenshot shows the homepage of the Coblis Color Blindness Simulator. The header features the 'Colblindor' logo on the left, a navigation menu with links to 'Home', 'CVD Essentials', 'Color Blindness Tests', 'Color Tools', and 'Contact' in the center, and social media icons for Twitter, Google+, LinkedIn, YouTube, and Facebook on the right. Below the header is a dark horizontal bar. The main content area has a large heading 'Coblis — Color Blindness Simulator'. To the right of the heading is a search bar with a 'Search' button and an email subscription form with a 'Subscribe' button. Below the heading is a paragraph explaining the simulator's purpose: 'If you are not suffering from a color vision deficiency it is very hard to imagine how it looks like to be colorblind. The Color **BL**indness **S**imulator can close this gap for you. Just play around with it and get a feeling of how it is to have a color vision handicap.' This is followed by another paragraph: 'As all the calculations are made on your local machine, no images are uploaded to the server. Therefore you can use images as big as you like, there are no restrictions. Be aware, there are some issues for the "Lens feature" on Edge and Internet Explorer. All others should support everything just fine.' At the bottom, a third paragraph encourages users to try the simulator: 'So go ahead, choose an image through the upload functionality or just drag and drop your image in the center of our Color **BL**indness **S**imulator. It is also possible to zoom and move your images around using your mouse – try it out, I hope you like it.' To the right of the text is a horizontal rainbow color bar with an eye icon on the left. At the bottom right, there is a 'SPONSORED SEARCHES' section with two buttons: 'Color Blindness Check' and 'Real Color Blind Test'.

Colblindor

Home ▾ CVD Essentials ▾ Color Blindness Tests ▾ **Color Tools** ▾ Contact

Coblis — Color Blindness Simulator

If you are not suffering from a color vision deficiency it is very hard to imagine how it looks like to be colorblind. The Color **BL**indness **S**imulator can close this gap for you. Just play around with it and get a feeling of how it is to have a color vision handicap.

As all the calculations are made on your local machine, no images are uploaded to the server. Therefore you can use images as big as you like, there are no restrictions. Be aware, there are some issues for the "Lens feature" on Edge and Internet Explorer. All others should support everything just fine.

So go ahead, choose an image through the upload functionality or just drag and drop your image in the center of our Color **BL**indness **S**imulator. It is also possible to zoom and move your images around using your mouse – try it out, I hope you like it.

Search

your email Subscribe

SPONSORED SEARCHES ▶

Color Blindness Check

Real Color Blind Test

Best practices for product development

- Project definition: Identifying accessibility concerns
- Product Manager: Determines what features get into the product, criteria for success
- Design & Research: Defines user needs, advocates for user feedback
- Engineering & implementation: Defines what the product is
- Quality Assurance: Responsible for testing using screen readers, common assistive technologies

Accessibility in Industry Panel

Preview of diverse accessibility career paths in industry

- Josh Halstead, Consultant
- Mike Shebanek, Verizon Media
- Carrie Farber, Walmart
- Skylar Peterson, Facebook

