

## Heuristic Evaluation of [ALTogether]

Evaluator A:

Evaluator B:

Evaluator C:

Evaluator D:

### 1. Problem/Prototype Description

ALTogether is an Instagram add-on that increases accessibility for the visually-impaired by encouraging users to create richer, more reliable alt text.

### 2. Violations Found

#### 1. H1. Visibility of system status

**Severity: 3 | Reviewer: A, C**

Before actually captioning your own picture, there is no way to see alt texts

- Fix: Add the ability to see alt texts before making your first caption

#### 2. H2. Match between system and the real world

**Severity: 2 | Reviewer: A**

Since the Alt text generation happens before captioning, it is not very clear that this is the Alt text generation. The phrase “review our work” is ambiguous.

- Fix: write “Here is our alt text generation” or “Write alt text here” to keep it as clear as possible.

#### 3. H3. User control and freedom

**Severity: 3 | Reviewer: A, C, D**

After the user adds alt text to their photo, it’s impossible to change it. The user may be irritated if they come up with a better alt text idea or accidentally clicked the Submit button.

- Fix: Add an edit button to your completed Alt Texts

#### 4. H4. Consistency and standards

**Severity: 1 | Reviewer: A**

There are wording differences between the guided and custom alt text generation pages

- Fix: Mention alt text in both pages

#### 5. H5. Error prevention

**Severity: 3 | Reviewer: A, D**

There may be typos, especially in the custom alt text, that may hinder a screen reader

- Fix: Have the app play the alt text out or add a simple grammar/spelling check before submitting

#### 6. H7. Flexibility and efficiency of use

**Severity: 3 | Reviewer: A, B**

The user has to hunt for their posts that do not have alt text

- Fix: Give an indicator on the user profile screen for uncaptioned photos

#### **7. H10. Help and documentation**

**Severity: 3 | Reviewer: A, B, C**

When users scroll through their own photos or the photos of others and can nudge others to add alt text or are reminded to add alt text themselves, it's unclear what the outline or lack of outline around the "alt" logo displayed on pictures means. This outline/lack of outline concept doesn't match up with how the same concept of a missing element is displayed in other UIs. Users are likely to be confused by what the outline around the logo actually signifies.

- Fix: Change the "alt" logo or the outline around the logo to be green or red, or perhaps to be "full" or "empty", to indicate that whether or not the user has provided alt text.

#### **8. H10. Help and documentation**

#### **9. Severity: 2 | Reviewer: A**

Nudging is never mentioned until you click on an alt bubble of another user

- Fix: Add an explanation of nudging to the documentation

#### **10. H3: User Control & Freedom**

**Severity: 3 | Reviewer: B**

Once a post is made, you cannot make a new post

- Fix: Allow users to make multiple posts

#### **11. H3: User Control & Freedom**

**Severity 2 | Reviewer: B, C**

Close Button does not work on documentation

- Fix: Allow users to close documentation if opened erroneously

#### **12. H3: User Control & Freedom**

**Severity 4 | Reviewer: B**

Can't go to home screen without filling out user screen

- Fix: Allow navigation to home screen even if the information is not fully filled out

#### **13. H3: User Control & Freedom**

**Severity 4 | Reviewer: C, D**

No way to swipe right to the last screen in the "Welcome to ALTogether" introduction sequence. Users may accidentally swipe left to the next slide without having read the previous one. They may feel frustrated if they're unable to immediately swipe right back to the last slide.

- Fix: Add the ability to swipe right to the last screen in the introductory sequence.

#### **14. H6: Recognition rather than recall**

**Severity 1 | Reviewer: D**

In the second slide of the “Welcome to ALTogether” sequence, the description uses the pronoun “it” to refer to “alt text”. For a user unfamiliar with the term, this may be confusing for a brief moment.

- Fix: Replace “it” with “alt text” to help users unfamiliar with alt text become familiar with the term more quickly.

**15. H7: Flexibility and efficiency of use**

**Severity 3 | Reviewer C, D**

After going through the “Welcome to ALTogether” sequence once, it continues to show up every time “Next” is clicked after adding filters to the photos. This may be frustrating for users that are already familiar with ALTogether and how to add alt text.

- a. Fix: Record whether users have gone through the welcome sequence and don’t show it to them again if they’ve already seen it.

**16. H4: Help and documentation**

**Severity: 2 | Reviewer D**

In the welcome sequence, the examples images and corresponding alt text don’t demonstrate how alt text can be used to add “nuance and context” beyond what is “sometimes auto-generated by a computer.”

- Fix: Have the examples in each of the slides correspond more directly with the text on that slide. For instance, in the second slide, there can be an image of how alt text is usually displayed on computers/phones. On the third slide, there could be an example of how “nuance and context” are added with ALTogether. For example, alt text poorly auto generated by a computer could be shown alongside alt text created using ALTogether.

**17. H10: Help and documentation**

**Severity 1 | Reviewer C, D**

Since the custom and guided alt text were not mentioned at all in the introductory sequence, I only noticed the “Custom” tab in the second pass through the app. Users may be confused as to how to create their own alt text if they miss this tab at first.

- Fix: Briefly show users that both tabs exist during the welcome sequence. For example, each tab could be highlighted with a mini tool tip briefly explaining what that tab is for.

**18. H10: Help and documentation**

**Severity: 2 | Reviewer C, D**

Usually, the information icon leads to documentation/help relevant to its context. Users may be confused by the fact that the information icon leads to the same welcome sequence for both the “Guided” and “Custom” tabs.

- Fix: Put the general welcome sequence info icon in the top right corner (to the right of “ALTogether”), and put info specific to “Guided” and “Custom” tabs for

the tab-specific info icons. For instance, the info icon under the “Guided” tab could lead to a tooltip that explains how the alt text is auto-generated and the concrete steps needed to modify the template.

### **19. H3: User control and freedom**

#### **Severity 2 | Reviewer C, D**

Users may love the very first alt text generated by ALTogether. They may be frustrated by the fact that the “Submit” button is grayed out without any changes.

- Fix: Enable users to “Submit” the alt text without changing the initial template alt text.

### **20. H5: Error prevention**

#### **Severity 3 | Reviewer D**

In the “Custom” tab, users could put gibberish, ableist language, or other hard-to-understand/harmful content to try and speed through the mandatory submission. Those on the receiving end of the alt text could be confused or hurt by such alt text.

- Fix: Check for trust & safety issues (e.g. harmful language) before submitting alt text.

### **21. H3: User control and freedom**

#### **Severity 4 | Reviewer C, D**

After the user edits one of the words/phrases in the autogenerated alt text, the button with a blue outline and X disappears and it seems to become a permanent change. Users may be frustrated at the inability to make a change if they made a mistake or come up with a new idea.

- Fix: Allow for users to make multiple changes to the text on the buttons with a blue outline.

### **22. H8: Aesthetic and minimalist design**

#### **Severity 1 | Reviewer D**

When you click the “alt” circle on the bottom right hand corner of pictures, a tab shows up at the bottom. It has a title “ALTogether”, as well as undecorated text (“Alt text”) prefixing the actual alt text. This takes away from the focus of the alt text.

Assuming users are introduced to how ALTogether works at the beginning, users may become fatigued by the redundancy.

- Fix: Eliminate the “ALTogether” title and “Alt text” prefix and center the alt text itself. There can still be metadata that indicates to screen readers that this is alt text.

### **23. H7: Flexibility and efficiency of use**

#### **Severity 1 | Reviewer D**

Currently, there is only one suggestion for each space in the template. This may cause users to simply accept what is already there. However, more suggestions could encourage creativity.

- Fix: Create a drop-down of options for each adjustable word/phrase in the template (e.g. three options) and purposefully include funny/more out-there suggestions that help expand the user's imagination. The last option can be to type your own.

#### **24. H9: Help users recognize, diagnose, and recover from errors**

##### **Severity 2 | Reviewer D**

Though there is a bar that says "N/X posts have alt text", it doesn't clearly show which pictures don't have alt text. An influencer may have hundreds, if not thousands of photos - they may be disincentivized to dig through which photos do or don't have alt text.

- Fix: Have a button that highlights the pictures that don't have alt text. Users can then click on the highlighted pictures to add alt text.

#### **25. H1: Visibility of system status**

##### **Severity 1 | Reviewer D**

After nudging someone to add alt text, it says that the nudge was sent to the person you're following, but there are no follow-ups to indicate the status of the nudge. Users may feel like they're shouting into the void or feel apprehensive about sending nudges if they'll just be ignored.

- Fix: This feature could be integrated with the Instagram messages feature. For instance, when you nudge someone, it shows up in the conversation between the two users in Instagram messages. This can be a space for users to brainstorm alt text together. And if the nudged user updates the alt text, an update message can be sent to their conversation by a bot.

#### **26. H2: Match between system and the real world**

##### **Severity 1 | Reviewer D**

Usually, when we go to a museum and look at a painting or photo, the caption is already there, to the bottom or the side. In addition, when alt text is displayed in emails or even in the introductory sequence, the text is usually to the bottom of the image. The same can be applied to social media apps - users may not feel incentivized to take the extra tap to see the alt text when the caption is already there.

- Fix: The alt text can be displayed right below the caption itself to make it a seamless transition for sighted readers to go from reading the caption to reading the alt text.

#### **27. H7: Flexibility and efficiency of use**

##### **Severity 2 | Reviewer D**

When people are tagged in a photo on Instagram, users can tap anywhere on the photo to reveal the tags. This means the “alt” button in the bottom right hand corner of pictures is an extremely small hit target. Users may miss hitting it often, leading to decreased usage.

- Fix: Like in the previous fix, having the alt text displayed right below the caption could solve this problem. Another potential solution is the addition of accelerating touch gestures. For instance, users could swipe up to see the corresponding alt text, or tap a larger button right next to the caption.

## **28. H1: Visibility of system status**

### **Severity 3 | Reviewer D**

There are no places that indicate whether you have a nudge or not. Assuming this is implemented in the notifications area, this would lead to nudges being buried among a lot of other information like likes, follows, and comments.

- Fix: Create a new nudges section in the notifications tab in the “Activity” section, similar to the “Follow requests” tab in that same section.

## **29. H8: Aesthetic and minimalist design**

### **Severity 0 | Reviewer D**

The description for when a user does not write text could be a tad verbose for some users. This could be made more concise so that the call-to-action isn’t prefaced by repeated phrases like “ALTogether”, “... did not write alt text” or “make their post more accessible”.

- Fix: A potential solution would be to have just the “Nudge” button, and have a text box above it where they can type a suggested alt text. The grayed out text that initially fills the text box could be something like “Help [dani] write alt text!”

## **30. H6: Recognition rather than recall**

### **Severity 1 | Reviewer C**

After editing the guided alt text, if the user clicks on the custom alt text tab and then back to the guided alt text tab, their edits and work on the guided alt text is lost. A similar result occurs when the user edits the custom alt text and then switches to the guided alt text tab. This forces the user to remember their alt text edits whenever they switch tabs.

- Fix: Save the user's changes to the alt text so that those edits are still present when the user switches tabs.

## **31. H3: User control and freedom**

### **Severity 1 | Reviewer C**

When adding alt text to an already-posted photo, the user can only add auto-generated alt text, and cannot add custom alt-text. Clicking on the custom alt text

tab has no effect.

- Fix: Allow the user to add auto-generated or custom alt text to photos whether they are posting them for the first time or adding text to an already-posted photo.

### **32. H8: Aesthetic and minimalist design**

#### **Severity 1 | Reviewer C**

On the page where users can edit the guided alt text, the phrase "Tap bubbles to edit" seems redundant since it's fairly obvious by the "x"s in the top right corners of the bubbles that they represent words that can be deleted and replaced. This paradigm is seen in other UIs, such as mobile iOS autocorrect or Google Docs spellcheck, where "x"s are used to show that autocorrect suggestions can be deleted. This information is not needed, clutters the design, and removes the user's focus from the actual editable text.

- Fix: Remove this text from the page where users can edit the guided alt text.

### **33. H8: Aesthetic and minimalist design**

#### **Severity 1 | Reviewer C**

After the user has clicked on a word to edit in the guided alt text, a prompt pops up asking the user about that word (for example, after clicking "strawberry", the prompt "This looks so tasty! Can you tell me what flavor it is?" pops up). This prompt is redundant and not really useful for the user because the user, being sighted, already knows the content of their photo well, and when clicking on a specific word, probably already knows how they want to edit that word. This additional prompting is irrelevant and unnecessary for the user to know what actions to take and successfully edit the guided alt text.

- Fix: Remove this prompt from the guided alt text screen.

### **34. H10: Help and documentation**

#### **Severity 2 | Reviewer C**

On the custom alt text editing screen, there's a help prompt for the user which reads "Writing your own alt text delivers content that only you can provide." This help is not specific enough to be helpful to the user, as it's not focused on the concrete task the user needs to perform (writing high-quality alt text from scratch).

- Fix: Change this prompt to deliver more specific information on how to write alt text, e.g. "Describe the visual content of your photo, including colors and figures."

### **35. H1: Visibility of system status**

#### **Severity 2 | Reviewer C**

After the user submits their alt text, there is no confirmation that their alt text was posted. The user lacks information about the system status, and this lack of

confirmation may be confusing for users, especially in cases when users have poor Internet connectivity and wish to confirm that their actions went through.

- Fix: Add a quick confirmation pop-up or screen after alt text is successfully posted to let the user know the status of their post.

### 36. H6: Recognition rather than recall

#### Severity 3 | Reviewer C

While editing the guided or custom alt text, if the user clicks the "i" information button, after proceeding through the introductory sequence again, all the user's work and changes to the alt text are gone. This forces the user to remember their past actions and past edits again.

- Fix: After the user clicks the information button, save their alt text edits so that they persist even when the user leaves the screen to get help.

## 3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of Status	0	1	1	2	0	4
H2: Match Sys & World	0	1	1	0	0	2
H3: User Control	0	1	2	2	3	8
H4: Consistency & Standards	0	1	0	0	0	1
H5: Error Prevention	0	0	0	2	0	2
H6: Recognition not Recall	0	2	0	2	0	3
H7: Efficiency of Use	0	1	1	2	0	4
H8: Minimalist Design	1	3	0	0	0	4
H9: Help Users with Errors	0	0	1	0	0	2
H10: Help & Documentation	0	1	4	1	0	6
<b>Total Violations by Severity</b>	<b>1</b>	<b>11</b>	<b>10</b>	<b>11</b>	<b>3</b>	<b>36</b>

**Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)**

## 4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D	Evaluator E
Sev. 0	0%	0%	0%	100%	
Sev. 1	9%	0%	45%	55%	
Sev. 2	20%	10%	50%	50%	
Sev. 3	45%	27%	45%	55%	
Sev. 4	0%	33%	67%	67%	
<b>Total (sevs. 3 &amp; 4)</b>	36%				
		29%	50%	50%	
<b>Total (all severity levels)</b>	22%				
		14%	47%	53%	



**\*Note that the bottom rows are *not* calculated by adding the numbers above it.**

## 5. Summary Recommendations

Overall, this was a fantastic medium-fi prototype! The product has a powerful mission and we really enjoyed going through the three tasks and exploring the prototype. The design largely followed all of the heuristics, but we'll provide a few high-level suggestions based on the violations we observed. One of the most significant trends we saw was giving users more control and freedom. The top heuristic violations were 1) User Control and Freedom, and 2) Flexibility and Efficiency of Use. We loved the options to modify auto generated alt text and create your own. However, we think the addition of audio input, sustained conversations rather than nudges, and the ability to undo any changes could take the app to the next level. While the ALTogether team did an admirable job attempting to provide help and prompts for users, oftentimes this help is not specific enough to be helpful, is unneeded and clutters the UI, or appears in scenarios where it interferes with the user's task workflow. Since the concept of alt text might be unfamiliar to many users, we would recommend rewriting many of the help prompts to deliver more targeted instructions on what good alt text includes and how specifically to write alt text using ALTogether's platform, and deleting a few of the on-screen prompts that are unnecessary for the user to successfully navigate through the three tasks and therefore clutter the UI and confuse the user.

We'd also love to add some feedback that doesn't directly pertain to the heuristic violations. First, we noticed that all the tasks were focused on sighted users. We're curious why all three tasks were focused on one side of the interaction. We think it could be valuable to look at how we can increase engagement and understanding between sighted and visually impaired users. In addition, we think it could be interesting to look at how Instagram's suite of tools for visual editing can be extended or adapted to help with the creative aspect of coming up with alt text. For instance, if you put on a certain filter, maybe the backend algorithm could make different suggestions or it could give a moodboard of words to use in a custom alt text. Also, the only way for users to modify the auto-generated text is to click on the words/phrases that the system allows users to modify. However, the auto-generated text could be erroneous (e.g. inaccurate description of the picture, grammatically incorrect, etc.). You might allow an option to rate the auto-generated description in order to better the AI algorithm in the backend generating the alt text. This way, users understand that ALTogether is a partner with the user in recognizing, diagnosing, and improving on errors in auto generated text, rather than a static source of truth that is sometimes on the dot, and sometimes way off home base. Additionally, when communicating with visually-impaired individuals face-to-face, voice is the most common medium. Communicating through alt text may not be the best form of communicating the content of the images. There could be an option for users to record themselves giving a description of the picture (how personal and awesome is that?!) or to simply have audio input translated into text. This adds additional nuance and context such as emotions, volume, etc. that weren't there before.

Overall, ALTogether's user interface is very clean and aesthetically pleasing. The UI echoes the Instagram UI in its clean white color palette and font choice, which helps it layer very nicely on top of

Instagram without too any jarring differences. We hope there becomes more consistency when alt text is displayed. Knowing which posts (those of you and your friends) is not immediately recognizable. Moving forward, we believe that with a few changes to minimize inefficiencies in the user's task flow and to target the help provided to align better with user goals, ALTogether will be a really useful, easy-to-use addition to Instagram.

### ***Severity Ratings***

- 0 - not a usability problem
- 1 - cosmetic problem
- 2 - minor usability problem
- 3 - major usability problem; important to fix
- 4 - usability catastrophe; imperative to fix

## ***Heuristics***

### **H1: Visibility of System Status**

- Keep users informed about what is going on

### **H2: Match Between System & Real World**

- Speak the users' language
- Follow real world conventions

### **H3: User Control & Freedom**

- "Exits" for mistaken choices, undo, redo
- Don't force down fixed paths

### **H4: Consistency & Standards**

- Words, actions, and UI elements should be consistent across the entire platform
- Follow platform and industry conventions

### **H5: Error Prevention**

- Minimize error-prone conditions
- Remove memory burdens, support undoing, and warn your users when necessary

### **H6: Recognition Rather Than Recall**

- Make objects, actions, options, & directions visible or easily retrievable

### **H7: Flexibility & Efficiency of Use**

- Accelerators for experts (e.g., gestures, keyboard shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

### **H8: Aesthetic & Minimalist Design**

- No irrelevant information. Focus on the essentials.

### **H9: Help Users Recognize, Diagnose, & Recover from Errors**

- Error messages in plain language
- Precisely indicate the problem
- Constructively suggest a solution

### **H10: Help & Documentation**

- Easy to search
- Focused on the user's task
- List concrete steps to carry out
- Not too large