Heuristic Evaluation of Timeline

1. Problem

The prototype gives a timeline of relevant articles for a specific topic that immediately puts the user into context, and supports three tasks of clicking on time machine button, searching for a timeline and posting a timeline.

2. Violations Found

1. [H2-8 Aesthetic and minimalist design] [Severity 2] [Found by: A, C, D]
The landing page for the prototype is a single news article from an external source with an unintuitive button located at the bottom right of the screen, which also covers a portion of the article. The user needs to figure out that the square button with a pink circle, two triangles, and some specks is the button to get to the Timeline interface. Add the phrase "View on Timeline" for the function, and make it a non-intrusive widget.

2. [H2-4 Consistency and standards] [Severity 1] [Found by: A, C]
In the home screen, only "world" has an inverted triangle next to it even though it seems to be just another section curated by Timeline like sports, finance, and featured creators. Users might click on "world," expecting to see a drop-down menu, and be disappointed. Remove the triangle.

3. [H2-1 Visibility of system status] [Severity 1] [Found by: A, B,D]
Clicking on "Coca Cola's Global Influence" from the home screen leads to a page that contains that timeline, but the page also contains links to two related timelines. What is this page for— is this a page for all timelines related to Coca Cola, the company? Provide a heading for the page, or place the other two timelines under another section within the page called something like "Related Timelines."

4. [H2-8 Aesthetic and minimalist design] [Severity 1] [Found by: A]
To get from a preview of search results to the page containing the timeline, users need to click on a tiny ">" located right below the preview image of the timeline. Make the button bigger and more conspicuous, or accompany it with a "Go to timeline" text.

5. [H2-1 Visibility of system status] [Severity 2] [Found by: A]
When the user clicks search upon entering the keyword, the search page literally displays placeholders such as "result 1", "result 2", and "result 3," and to get to the actual results the user must click on "result 1." Remove this additional step.

6. [H2-8 Aesthetic and minimalist design] [Severity 1] [Found by: A, C]
Clicking on a certain type of timelines (e.g. world/sports/finance/featured) leads to a reordering of sections so that the chosen type is at the top, and the rest are be shuffled. This seems unnatural; make the buttons be reference links so that clicking on a section will auto-scroll to the corresponding section.

7. [H2-2 Match between system and the real world] [Severity 0] [Found by: A,D]

"My Time Lines" implies timelines created by the user, not timelines the user is following (substituting "time lines" to "posts" might make the problem clearer— could "my posts" mean posts I wrote or posts I'm following?). Combining the two seems unnatural. Replace "My Time Lines" with something like "Timelines I follow" and "My timeline creations".

8. [H2-2 Match between system and the real world] [Severity 1] [Found by: A, C]
Within the "My Time Lines" page, there is a plus button surrounded by a circle right above "Timelines I follow," which might lead the user to think that clicking the plus button will let the user add timelines to follow (when it's actually for creating timelines). As suggested in violation #7, split the page into two so that the plus button could only refer to creating timelines or put the button next "Timelines I made".

9. [H2-2 Match between system and the real world] [Severity 0] [Found by: A, C]
When the user is prompted with a confirmation dialog that asks whether the user is sure s/he wants to delete the link, "no" precedes "yes" in left-to-right order which is not natural. Have a default option by highlighting "no."

10. [H2-2 Match between system and the real world] [Severity 2] [Found by: A]
Just as a timeline can span over 200 years as well as 20 years, some timelines might only span over a day if it covers events/concepts in the real world, in which case time would be of utmost importance. Make the prototype support time information to distinguish between events that happen within the same day.

11. [H2-3 Error prevention] [Severity 2] [Found by: A]
The prototype won't let the user add links to a timeline unless the user entered a title, possibly to prevent the creation of timelines without titles. Let the user add links before coming up with a title, and make the title a required field (notify the user accordingly before letting him/her post if the title field is empty).

12. [H2-4 Consistency and standards] [Severity 1] [Found by: A, B, D]
When creating a timeline, the instruction states "Drag Drop links/images" for the first link, and "Drag drop link" for the second one. Does this mean that the first one is allowed to have images, but the subsequent ones don't? If not, use "drag and drop links/images" for all links.

13. [H2-1 Visibility of system status] [Severity 0] [Found by: A]
When the user deletes the first link while creating a timeline, the title that the user has already entered disappears as well. Preserve the title information so that the user can continue to add links.

14. [H2-9 Help users recognize, diagnose, and recover from errors] [Severity 2] [Found by: A]
Currently there is no information on what type of images users can post. The interface should let the user know the size limit for images (surely an upper bound must exist), and also let them know if their image exceeds the size limit and ask them for an image of smaller size.

15. [H2-10 Help and documentation] [Severity 2] [Found by: A]
There should be more guidance and hints for creating timelines; for instance, providing suggestions on how specific titles should be would prevent a timeline that's actually about the history of the Los Angeles Dodgers from being titled "Baseball." The prototype should also warn the user about articles that are biased.

16. [H2-1 Visibility of system status] [Severity 2] [Found by: A]
To finish creating the timeline, the user has to click on "Finish editing." Editing implies that something already exists, whereas posting implies that the timeline is being created from scratch (which is the case for "A History of My Thai Salad Recipes"). Distinguish between posting a new timeline and editing an existing one. If you decide to do this, "Timelines I made" should have an "edit" feature so that the user does not have to make a new one from scratch if they wish to add articles.

17. [H2-4 Consistency and standards] [Severity 1] [Found by: A]
The home screen banner uses "TimeLine," the button to view a user's timelines says "Time Lines," when viewing a specific timeline the logo displayed is "Time Machine," and the URL is spelled "timemeachine." The last one is probably a typo, but users may be confused by the distinction between a timeline and a time machine. Is a time machine comprised of several different timelines? Use "Timeline" on all screens.

18. [H2-4 Consistency and standards] [Severity 1] [Found by: A]
In the home screen, the section is titled "featured creators," in the "My Time Lines" page, it's titled "featured," and in the same page when visited after posting a timeline, the section is titled "Pick of the day." Are these all different concepts? If not, use "Featured" across all screens.

19. [H2-3 User control and freedom] [Severity 2] [Found by: A]
Source is just as important as the headline of an article, if not more— users should be able to view which source an article is from before clicking on the article to allow them to have more control over what they deem trustworthy or spurious. Add source information for each article on a timeline.

20. [H2-2 Match between system and the real world] [Severity 1] [Found by: A, B, C]
In Hotmail, flagging an e-mail is marking it as important (and if your response is "but who uses Hotmail anymore?"… touché). Replace the word with something with an outright negative connotation such as "report" or "biased."

21. [H2-6 Recognition rather than recall] [Severity 2] [Found by: A]
Once the user clicks on a link, the prototype takes the user to the link where the original article is located, at which point the user has exited Timeline and lost the context for the article. Have all articles be displayed without leaving the Timeline interface so that the users can view and refer to articles in the context of the time (e.g. how it fits in the timeline itself).

22. [H2-2 Match between system and the real world] [Severity 1] [Found by: A, C]
Also within the "My Time Lines" page, the "world," "sports," "finance," and "featured" section buttons are carried over from the home screen; however, its placement on this page makes the user think that the buttons are for timelines on this page (not the home screen). Remove the buttons, and add a "back to home screen" button.

23. [H2-4. Consistency and standards] [Severity 3][Found by: D]
When I am in the Coca-Cola timeline page, there is no button, which allows me to follow that timeline. The button appears only when I am in the Timeline Main Page. It is not consistent across the entire platform. What if the user wants to follow the page right away? Not a great user flow experience as well.

24. [H2-2. Match between system and the real world] [Severity 3][Found by: B, D]
The flagging feature is slightly unclear as a user. What happens when I flag content does it get removed from the timeline that I am viewing? Or does it open up a pop-up tab where I enter the concerns I have with the article. The action is not clear. I have the option to flag sections of the timeline but why can't I flag the entire timeline as a whole. There should be a provision for that.

25. [H2-10. Help and documentation] [Severity 2] [Found by: B, C,D]
I only knew to click the timeline button because I knew what I was trying to test. For a new user, the timeline icon may seem very foreign and may not use it without some help. Add a small help icon next to the button.

26. [H2-8. Aesthetic and minimalist design] [Severity 1] [Found by: B]
The bars on the top that show relevant topics ("Coca Cola's global influence", "Pepsi Cola's Marketing Campaigns") could be made more apparent. Right now ,it just looks like floating buttons that could serve any function. If the buttons were a menu bar instead it would make it more obvious that users and switch around topics.

27. [H2-3. User control and freedom] [Severity 2] [Found by: B]
The relevant topics buttons are auto-generated. What if the user wants to see even more relevant topics or want to see a different set of relevant topics? Right now there isn't any mechanism that gives that freedom. Add a "refresh" button that will give a new set of relevant topics, or allow users to select certain phrases from the article.

28. [H2-7. Flexibility and efficiency of use] [Severity 1] [Found by: B]
The timeline could be cluttered if there are a lot of relevant articles around a certain date. Then the user should be able to zoom in and out of certain timeframes and the information should clutter or disperse accordingly. Add a function to zoom into or out of certain timeframes.

29. [H2-8. Aesthetic and minimalist design] [Severity 2] [Found by: B]
The timeline is scaled in an interesting way. It jumps from 2013 to 1940 and the spaces in between are not scaled. This could be seen as a little off putting to the user, so it may be a good idea to add some sort of indication on the timeline to show that there aren't any other events in between (adding a zigzag line for example).

30. [H2-4. Consistency and standards] [Severity 1] [Found by: B]
The colored boxes and its link to the four categories are a violation, because while they give a clear indication of which box belongs to which category, the categories may not always be consistent. From browsing through different pages, it seems like there are more than the four categories listed in the home page (world, sports, finance, featured categories). If "food" came up as one of the four categories in the same color the page displayed as "finance" a moment ago, that would confuse the user and violate the consistency heuristic. Make the coloring less obvious (use pastel tone or a gradient of colors instead).

31. [H2-9. Help users recognize, diagnose, and recover from errors] [Severity 2] [Found by: B]

All the timeline articles are linked to a real online article. What if that article disappears / no longer exists? This is an error that users would find frustrating with frequent occurrence and users would want to report lost or non-existent article. Add a button to "flag" articles with these problems.

32. [H2-1. Visibility of system status] [Severity 1] [Found by: B, D]
When the user clicks the 'Follow' button, it brings the user to the timeline. This doesn't show whether the timeline has actually been 'followed.' Instead of reloading the page to the timeline when follow is clicked, just grey out the follow button, or change the button to 'following' to show that it was successfully added to the follow list.

33. [H2-7. Flexibility and efficiency of use] [Severity 3][Found by: D]
It took me 7 clicks to finally come to the 'create a timeline' button. It should be made available on each tab to make the discovery process easier.

34. [H2-3. User control and freedom] [Severity 1] [Found by: B]
After clicking on the add timeline button, there isn't a way to undo or cancel it other than clicking on 'My timelines' button that brings the user back to user page. This is not a clear "emergency exit". Support undo / cancel while making the timeline.

35. [H2-4. Consistency and standards] [Severity 3] [Found by: B, C]
"Drag Drop Links/Images" is not very consistent for the user, since the user needs to use the same channel to add both a link and an image. That means the user could do something different using the same button every time the user makes a timeline. At least from user standpoint, it may be better for the two adding parts to be separated so that adding images and links are distinct processes.

36. [H2-5. Error prevention] [Severity 3] [Found by: B]
What happens if the user only adds an image? What if the user only adds a link? What if the user adds both? Will it give the user an error message if no link is pasted? Either separate the add link and add image sections, or add clear error messages when user tries to post an article without a link.

37. [H2-4. Consistency and standards] [Severity 2] [Found by: D]
 When I click on 'My timelines', the tabs and results are not arranged in the same format as the timeline page. Not color coded in the same way.

38. [H2-1. Visibility of system status] [Severity 0][Found by: B]
Very minor, but when user finishes making the timeline, there isn't any indication that this was successful. The user can see the timeline on the user page, but it might be good to give a message that posting was successful.

39. [H2-2. Match between system and the real world] [Severity 0] [Found by: B]
What does it mean to unfollow your own post? Currently your own posts also have unfollow options with it, does that mean you will not be getting any notifications from this post? Keep the meaning of these buttons clear to the user by using more descriptive/intuitive words, or get rid of unnecessary functionalities.
40. H2-8. Aesthetic and minimalist design [Severity 2][Found by: D]

Featured creators shouldn't be in the same bucket as the other tabs like Sports, World, etc. This is because the other tabs represent the type of content and nature of the article. The featured creator ties back to the person who created it.

41. [H2-4 Consistency and Standards] [Severity: 3][Found by: C]
On most websites, "Follow" refers to following a user and getting updates on their new posts. However, I see that Timeline follows timelines instead on the "My Timelines" page. Additionally though, the user can still follow other featured users on the homepage. Decide whether you want "Follow" to refer to timelines or users, and only use it for one of them. I suggest users because that tends to be the norm for websites. You can still include saved timelines for the user to easily go back to by changing "Follow" to "Save" for the timelines.

42. [H2-6 Recognition rather than Recall][Severity: 3][Found by: C,D]
There are follow buttons on the homepage which shows the previews of the timelines, but not on the actual timelines. The user will probably not want to follow someone until they have read one of their timelines. Include the follow button on the timeline page.

43. [H2-8 Aesthetic and Minimalist Design][Severity: 2][Found by: C]
You mention in your notes that you don't add images because you think they will clutter the page. However, images are easy to glance at to get an idea of the subject matter of an article, whereas a page full of text boxes with only article titles may be more overwhelming to the user. Include images in addition to article titles at least on the homepage. I think your current design is simple enough that the images will not clutter it. On the actual Timeline, I find images less necessary because the way the years are spaced gives a visual structure.

44. [H2-4 Consistency and Standards][Severity: 1][Found by: C,D]
The home page is color coded with the buttons at the top. The My Timelines page also includes those buttons, but is not color-coded. If you color-code something, color-code all references to it, including the buttons on the next page.

45. [H2-6 Recognition rather than Recall][Severity: 1][Found by: C,D]
The user gets to the My Timelines page by clicking a link that says "My Timelines." However, once there, the title still says "Welcome to Timeline" like it did on the homepage. Make it clear to new users the page they navigated to by changing the title to "My Timelines." In another case, the title says "Time Machine" rather than a description of the page (for example, rather than "Create New Timeline" for the timeline page).

46. [H2-3 User Control and Freedom][Severity:2][Found by: C]
The user can return to the homepage by pressing the title button. On the actual Timeline and in making the Timeline, the title button is called "Time Machine." After first discovering that clicking "Time Machine" leads to the homepage from the Timeline, this becomes a learned behavior for the user. However on the My Timelines page, the title says "Welcome to Timeline." This page also includes buttons from the homepage, but no clear link to the homepage. Include "Time Machine" buttons on screens where you want the user to be able to return from the homepage.

47. [H2-8 Aesthetic and Minimalist Design][Severity: 1][Found by: B, C]

You mentioned that your prototype limits the color choices. The current choices are bright and overwhelming, and clash with each other. Moving forward and when you have other options for colors, choose pastel or very faded colors, and use a color wheel to ensure that the colors do not clash.

48. [H2-3 User Control and Freedom][Severity: 2][Found by: B,C,D]
When exploring the site for information, the user may want to go through a few timelines and then return to the ones they found the most helpful. Currently, the only way to do so is by clicking the back arrow (i.e. that is the only way to get back to the coca cola timeline). Include a section of recently viewed timelines, either on the home screen or on the My Timelines page.

49. [H2-4 Consistency and Standards][Severity: 1][Found by: C]
On the Coca Cola timeline, the article "Coca Cola Advertising from early 1900 to 1980" maps to year 1940, or the average between 1900 and 1980. This is misleading, and if the title did not include the actual years (i.e. if it was called "Early Coca Cola Advertising" instead), the year 1940 would be even more misleading. Spatially use the average, but list the range when you list the year.

50. [H2-5. Error prevention] [Severity 2][Found by: D]
Why is Pepsi in the coca cola timeline? I get that they are competitors, but I want only coke data it gets distracting. The user may think that it's an error.

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]	2	2	2	0	0	**6**
[H2-2: Match Sys & World]	3	3	1	1	0	**8**
[H2-3: User Control]	0	1	5	0	0	**6**
[H2-4: Consistency]	0	7	1	3	0	**11**
[H2-5: Error Prevention]	0	0	1	1	0	**2**
[H2-6: Recognition not Recall]	0	1	1	1	0	**3**
[H2-7: Efficiency of Use]	0	1	0	1	0	**2**
[H2-8: Minimalist Design]	0	4	4	0	0	**8**
[H2-9: Help Users with Errors]	0	0	2	0	0	**2**
[H2-10: Documentation]	0	0	2	0	0	**2**
Total Violations by Severity	**5**	**19**	**19**	**7**	**0**	**50**
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	
sev. 0	3	2	1	1	
sev. 1	10	9	9	5	
sev. 2	9	5	5	6	
sev. 3	0	3	3	4	
sev. 4	0	0	0	0	
total (sev. 3 & 4)	0	3	3	4	
total (all severity levels)	22	19	18	16	

5. Summary Recommendations

Overall, we found four general areas where we felt the prototype could be improved:

1. Navigation for first-time users
Given that most of violations are around consistency and efficiency of use, the focus should now be on rethinking the user flow process. Clearly outline the landing page, indicate how the user moves from one tab to the other, clearly define the clickable and actionable components of the page, and also outline how all the three tasks are connected. Given the complexity of this platform, there should be a proper documentation on the workings of the platforms through a 'How it works' tab maybe.

2. Presentation of data
We recommend restructuring both the home screen containing timelines as well as the individual timelines themselves. The individual timelines should reflect the "time" component more accurately-- for instance, there should be a zig-zag line denoting that there was a century's worth of gap to distinguish the gap from a gap of three years. As for the home screen with many different timelines, we recommend fixing the re-ordering that happens upon click of certain categories, and maybe altogether re-thinking the display based on categories.

3. Terminology
One of the issues that seemed to be a trend across violations was standardizing subtasks, most severely with following and flagging, but also with others in the list. Being confused about what exactly these refer to confused our high-level understanding of the tasks. In other words, a more detailed pass over the app confused us when looking at things like follow and flagging and trying to figure out what they referred to.

4. Incentives to post
You mentioned in your presentation that you wanted to give users incentives to post. However, we didn't see much of these in the actual prototype, other than featured users. Featured users rewards expert users, but new users of the app do not have any immediate rewards that might incentivize them to make a timeline.