Timeline

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Our Mission

With Timeline, we want to save people the time they'd normally spend doing background research on a topic by giving them a context relevant timeline of articles whenever they need to know more about a topic.

Our Value Proposition: Timeline: *Instant context for everything.*

The problem and our solution

It's hard to find the best content online. Save yourself the search. Use Timeline and get context relevant, expert curated content instantly at the push of a button.
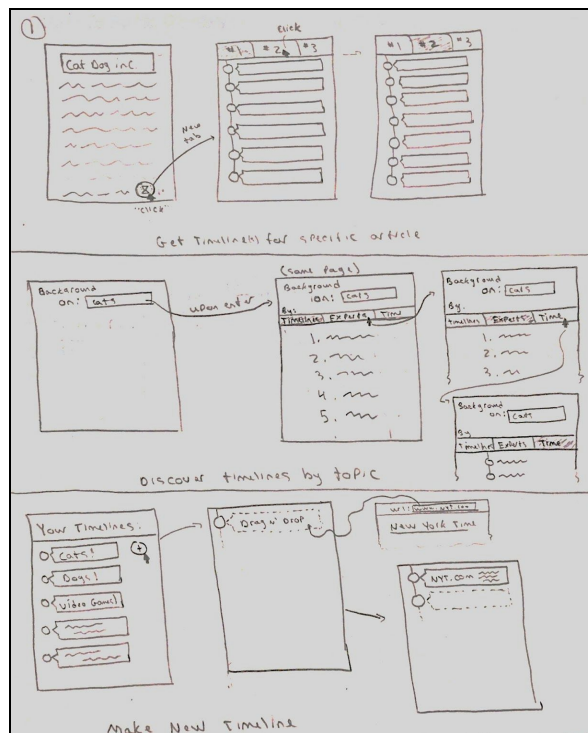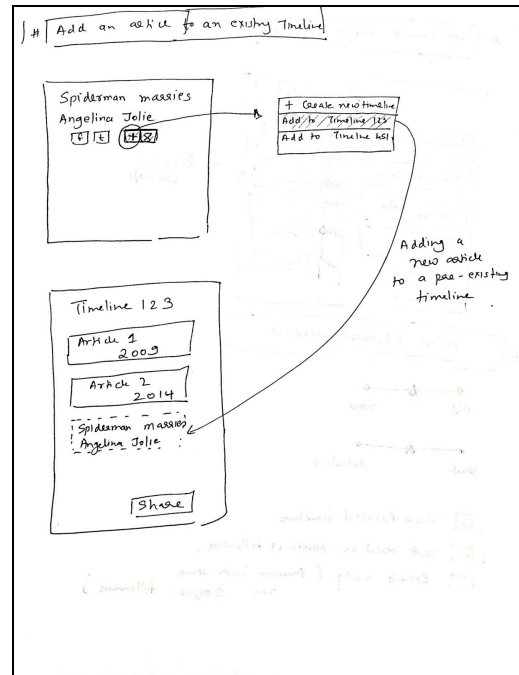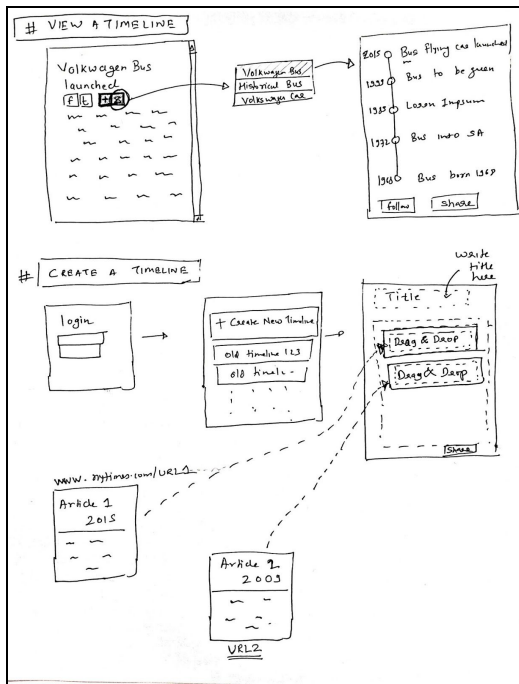
Our Sketches
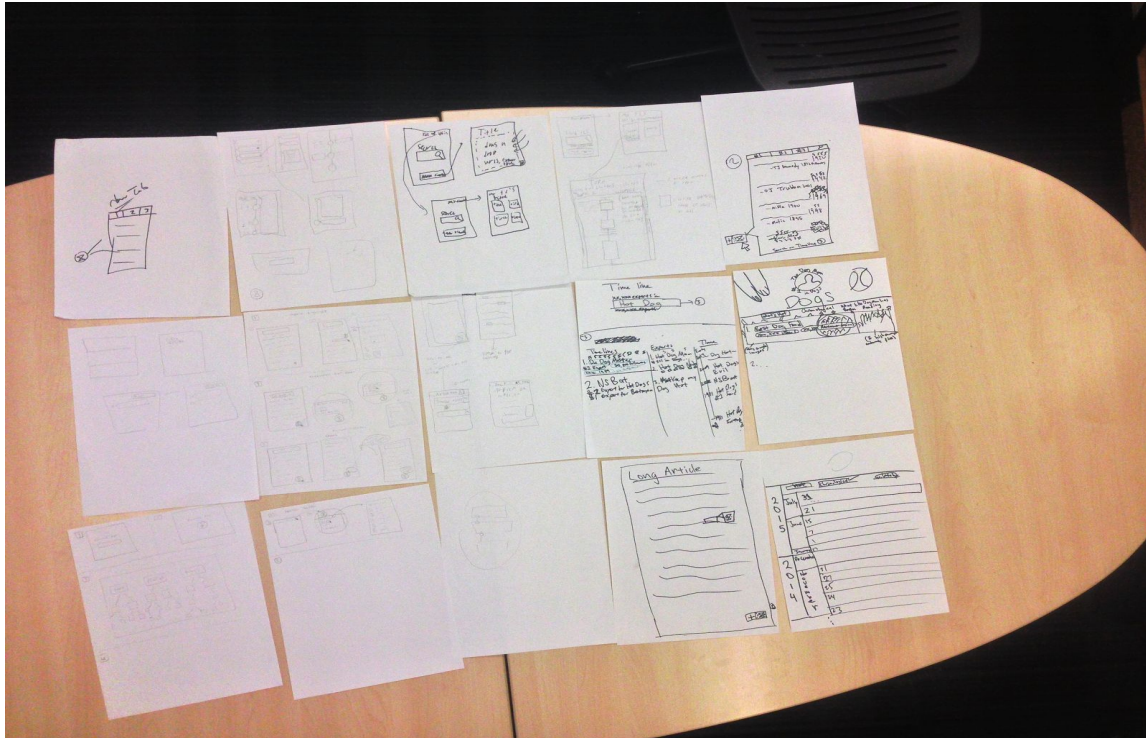
In this part of the assignment each team member individually sketched out ideas as to what each of our 3 tasks would look like. This meant sketching ideas for how someone would view a timeline that offers context for a topic they're reading about, find timelines for topics they're interested in, and share their expertise by making their own timelines.

Our resulting sketches imagined different kinds of timeline generating buttons that sit in different places for users to use while browsing, different types and orientations of search bars, different layouts and views for results, and different mechanisms that allow you to put together articles in your own timeline.

Upon completion of the sketches we pieced together our favorite realizations of each task from our sketches into two unique storyboards pictured below:

Our Storyboard:

The storyboard we decided to reference for our paper prototype took the best pieces from both of our storyboarded sketches which is described below and broken down by task:

Task 1: View a timeline that gives context to a topic you're reading about

> For this task we depicted a circular button that sits at the bottom right corner of a user's browser (overlayed on top of their content at all times) and opens a new tab with the top three selected timelines upon being clicked.
>
> We liked this implementation because it didn't contain any menu's the user needed to press and it put the button in an always present and easy to click position. Other implementations we messed around with involved a pop-up menu triggered by the the button that users could use to pick from a selection of timelines but we thought this was adding an unnecessary step for users - better to just give them a few options without question in the new tab.

Task 2: Discover timelines for topics you're interested in

> For this task we settled on a main search page with a search bar in the top right corner and results and preview frames below.
>
> We liked this idea because it gave users immediate results without being moved to a new page and provided them a quick way of sampling a timeline before they chose to view it.

Task 3: Share your own expertise by making your own timeline

> For this task we settled on a creation page that allows users to drag and drop urls into an outlined space in order to generate new entries in their timeline.
>
> We settled on this idea because drag and drop seems like a natural function to perform that most people have experience with.

Overall: We tried to go with a user flow that made the user to perform the least amount of steps possible in order to get what they wanted. We wanted an easy to press always present timeline button. We wanted an easy to read, informative timeline layout. And

lastly, we wanted a simple mechanism people could pick up with ease for building new timelines.

Our Prototype and Implementation

Here we describe our paper prototype implementation of the storyboard described above.

The Timeline Button
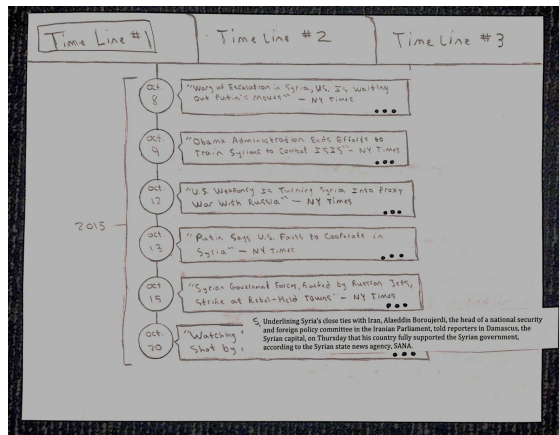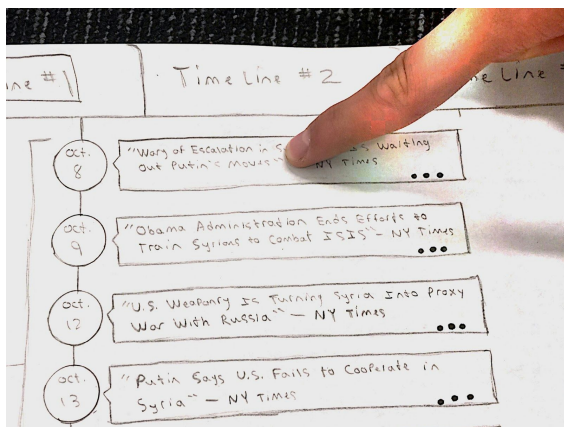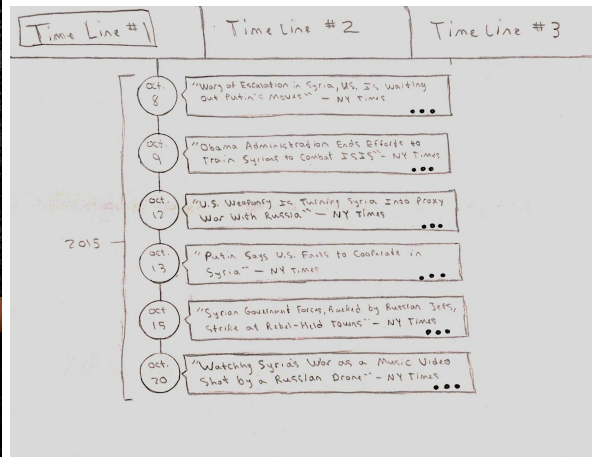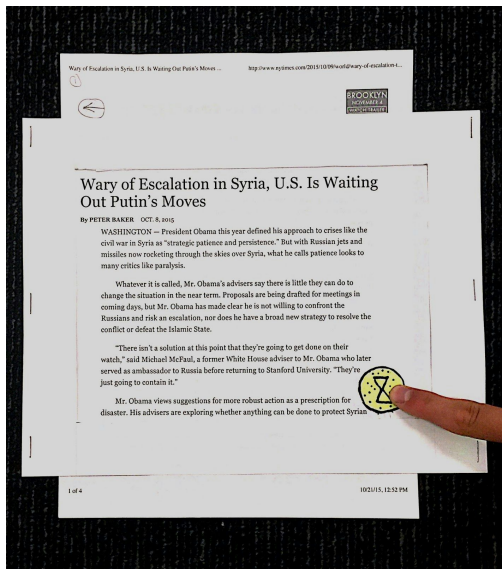
 To bring our timeline button to life we constructed a paper frame that served as a browser window and allowed users to "scroll" through a selection of paper news articles while keeping a timeline button always present at the bottom right corner. If the user "pressed" the timeline button the computer replaced the 'browser window' with a

timeline for that article. If the user tapped any of the "..." markers on the bottom of an entry the computer placed a relevant paper cutout summary underneath the given article. If the user clicked the actual entry the computer would swap the timeline with a paper copy of the referenced article.

Searching For a Timeline
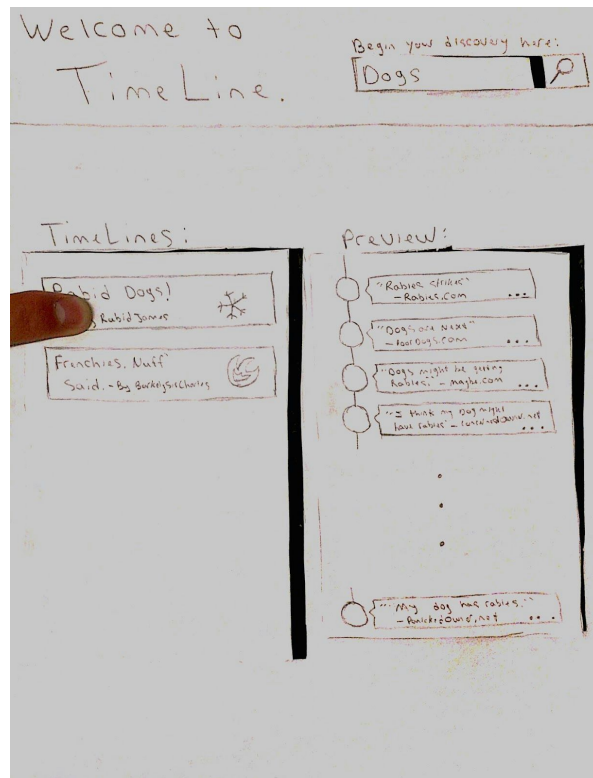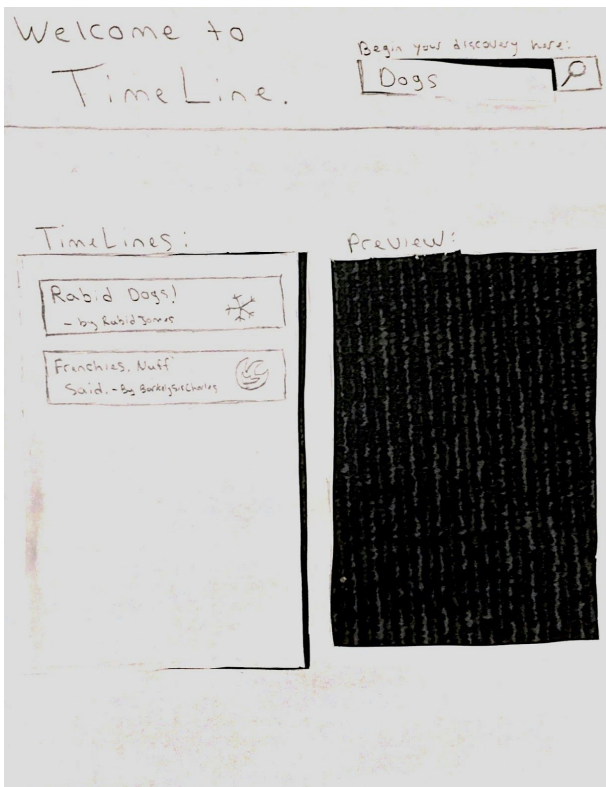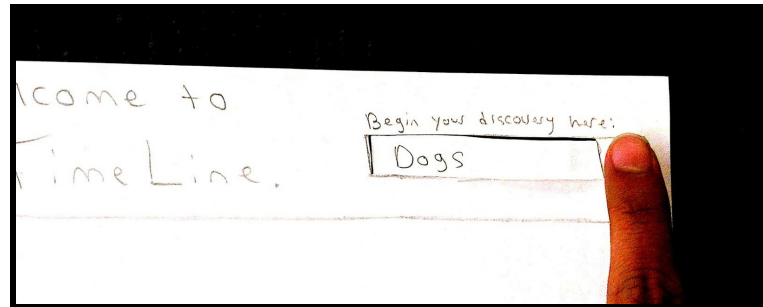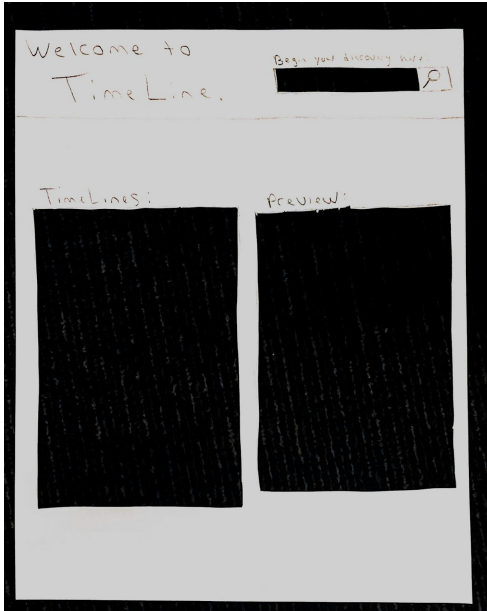
In creating a working version of our search page we simply cut a space in the search

bar where users inserted one of two test topics (dogs or cats) which would result in the computer placing a list of results in the space labelled timelines. If the user then tapped a timeline the computer would lay down a preview of that timeline in the section labelled previews.

Creating a Timeline
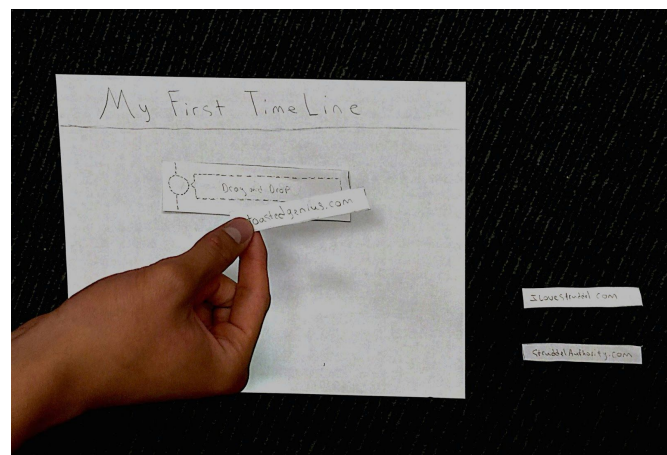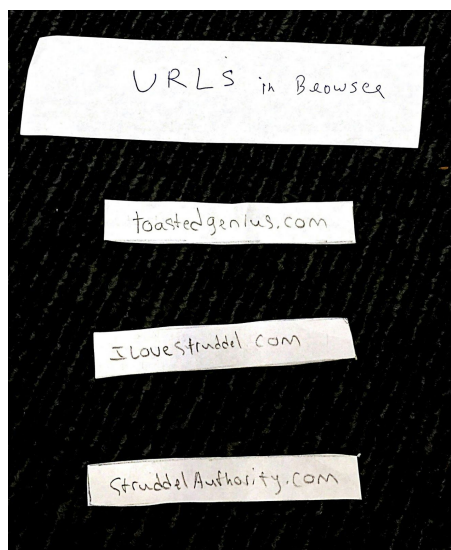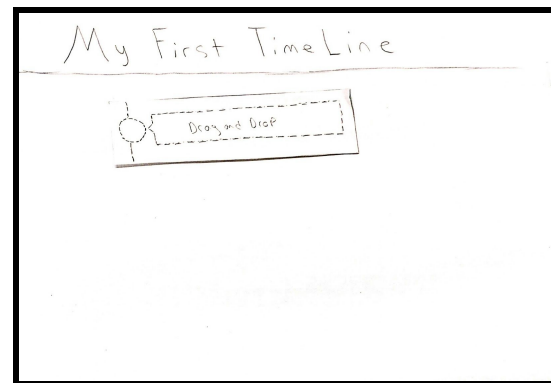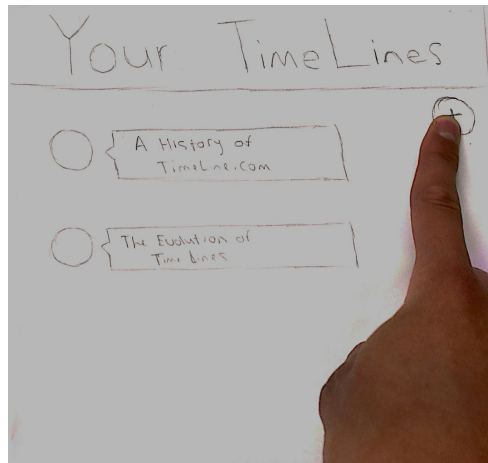
For the create your own timeline feature of our prototype we provided the user with 3 fake urls that they could place on a timeline template equipped with a dotted line version of a timeline entry that says "drag and drop." Upon the user doing this the computer

pushed the drag and drop box down and put in it's place a new timeline entry for the provided url.

Overview of Prototype
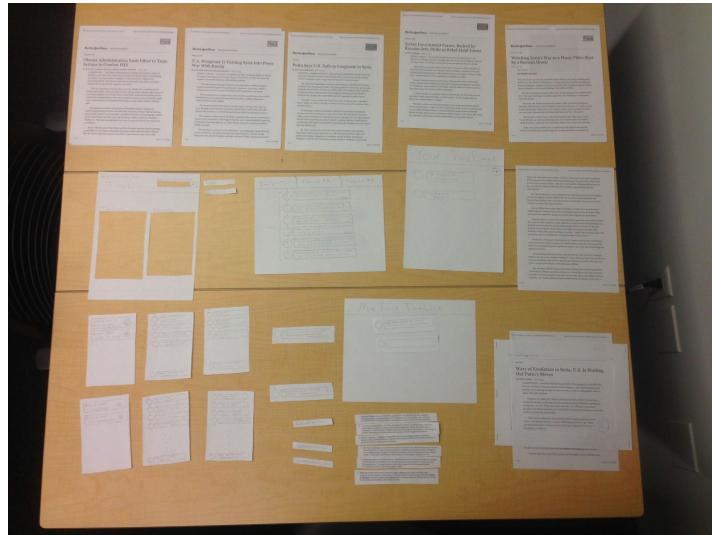
Our Method:

Our Participants

We interviewed two undergrads and a PHD student. We chose these people as part of a demographic that frequently requires to do scholarly research and quickly learn about new topics.

Lauren- An undeclared Sophomore student athlete on the Softball team who counsels at Shipwreck in her spare time.

Patrick- A Sophomore with a strong business history majoring in Computer Science.

Jafar- A 4th year Phd. math student from Azerbaijan studying probability.

Environment

Testing was conducted in a conference room in the Lathrop Tech Lounge.

Tasks

Each subject tried out all 3 of our tasks:

1. View a timeline that gives context to a topic you're reading about
2. Discover timelines for topics you're interested in
3. Share your expertise by creating your own timeline

Procedure

After agreeing to test our prototype, subjects were taken to our conference room in the back of the Tech Lounge. Andrew served as 'the computer', Peter was the handler responsible for walking subjects through the trial session and Stephen was the note taker and recorder. Once the subject was seated at a clear table, Peter, working from a pre-written script, gave the subject a short introduction to our group, our class and a brief glimpse of a TimeLine itself. After this introduction, the user was provided with an article placed in our homemade browser frame. From there, each subject interacted with our 3 task modules as described above in our paper prototype summary until they discovered all of the system's functionality. Upon finishing each task Peter introduced them to the next one as the computer set things up. When the trial period was complete Stephen asked a set of follow up question we've included in the appendix.

Test Measures

Our test measures were largely:

1. How confused the subject appeared
2. The time it took a subject to interact with/understand the interface of a page
3. What they found most confusing
4. Whether they were able to complete each task without asking for hints

5. All answers to our post interview questions.

Results

<u>Task 1:</u>

- Everyone had a hard time figuring out they needed to press the TimeLine button
- Everyone found the summary buttons on their own, got the summaries for multiple articles and either nodded or smiled as doing so.
- Everyone managed to link to articles from the timeline on their own
- Each person tried to see one of the other two tabbed tablines (though they weren't available in our demo
- None of the users spent more than 20 seconds reading a given article once it was put in front of them.
- <u>Q: How'd you feel about the button?</u>
  - Pat: "Makes a lot of sense, solves same issue of in the middle of article wishing you could know more about it."
  - Jafar: "button was kind of confusing but maybe because it was my first time"
- Q: <u>How'd you feel about the timeline?</u>
  - Patrick: "Like idea of people doing different timelines. More creative way to use space though (instead of tabs)?"
  - Lauren: "Good way for me to just get quick background info on new topics."

<u>Task 2:</u>

- Everyone worked through this section very quickly
- Pat obtained his first preview and said "very cool" while Jofar noted during his trial, "Oh how easy."
- Everyone tried to tap the preview to obtain the full timelines (though they weren't available in the demo)
- <u>Q: How'd you feel about the search window?</u>
  - Patrick: "Unless specifically for timeline, not used as much vs top feeds."

<u>Task 3:</u>

- Almost nothing to note in terms of user surprises

- Everyone flew through this section very quickly as well.
- Pat and Jofar immediately knew to click the circular plus button to create a new timeline. Lauren took under ten seconds as well.
- Everyone created all 3 entries back to back with no problem.
- <u>Q: What'd you think of making a timeline?</u>
  - Jafar: "I probably wouldn't do that...Would I go to see other people timeline? If someone professional I will view...If someone lists all news it can be biased, I wouldn't trust some random guys news article"
  - Patrick: "I think it's for certain consumers, bloggers, reddit users, I'm not one of those people."

<u>Q: "Anything you wanted to do that you couldn't?"</u>

- Jafar: "Can't see comments. Sometimes I go directly to comments, like to see that."

<u>Q: "Would you find this useful?"</u>

- Jafar: "Ya, definitely. If it's about sports I would definitely find it useful to catch up on things I've missed"

<u>Q: "Overall thoughts?"</u>

- Patrick: "Timelines makes sense, vs traditional news sources, contextual news is better."
- Jafar: "Really easy, liked it, the idea I can see all news in one place is really, really important"
- Lauren: "As a study tool it's a nice idea"

Discussion

Overall, our participants seemed to feel that the interface was very easy to use. There were few observable user errors save the Timeline button itself not being noticed at the beginning of two of the tests which signaled that it may have been more novel to our subjects than we initially thought it would be. Other than that, our participants sped through the search and create tasks with two of them even noting how "cool" and "easy" the processes were. From our interview results there were a few observations we found

important to take note of.

The first point was that each of our users was excited about how easy it was to be given context on a topic of interest. Jofar was thrilled at the possibility of having a way to catch up on his favorite team's sports news, Lauren was very excited about using the button to quickly learn a lot about a new topic, and Pat noted how much better he preferred this idea over traditional news which expects readers to already be informed of context. As he stated - "It's not fair to expect people will be so informed, contextual news is better." *So moving forwards* we have more confidence that providing easily digestible context to topics of interest is a service that people will be excited to have.

The next point is that users seemed to value the idea of different perspectives provided to them on a single topic by multiple Timelines. We know this from Jofar who said that he liked having multiple timelines on each article and Pat who said he liked the idea of having different perspectives on a single topic. And even at a surface level each user tried to access a second tabbed timeline (that wasn't actually available for them) telling us that if it's there they'll want to consume it. *So moving forwards* it seems like it may be important to promote timeline content that looks at a single content from different perspectives and it will be interesting to see what we can do with the design of our system to do so.

Another point is that our users were concerned about trusting the quality of any given Timeline with Jofar noting that he wouldn't trust work from strangers and Lauren noting that she would use the service for getting personal background knowledge on a topic but might think twice before citing the content in a research paper. It will be problematic for our service if we can't get anyone to read content because they don't trust it. *So moving forwards* we may want to delve into how companies heavily involved in sharing economies like Uber or Airbnb build trust between their users and implement a feedback system users can use to provide feedback on the success of whole timelines or even relevancy of certain articles within timelines in order promote good content and make it visible.

Stemming from this point we had two users acknowledge that they probably wouldn't generate content. Getting users to generate content seems like it will be one of our biggest challenges and deserves very close attention.

Yet Another point we noted is how much our subjects seemed to enjoy getting quick summaries of content (by pushing our "..." buttons at the bottom of each TimeLine entry). Each subject read multiple summaries of different articles before they read a full

article and spent very little time reading said full articles. On top of this, Patrick made a point to note that he thought the timelines were a fitting form of content for our generation whose attention span is minimal while Jofar noted how much he liked being able to see all the news at once by looking at a timeline. ***So moving forwards***, it might be important to consider what content we display on the timeline. If quick summarizing information is as attractive as it seemed to be in our 3 initial tests, then maybe users would prefer it if we automatically displayed short summaries next to each entry instead of requiring them to perform an additional step of clicking a summary button.

Lastly, after hearing it from Patrick, we think it will be important to consider moving forwards how we want to users to discover content by topic on our homepage. Do we want to only give them a search bar or do people also want to be have the hottest topics given to them?

Word Count: 2372

Appendix

Test Script

1. So first off, thanks for agreeing to doing this!
   a. We are all enrolled from idea to execution and the issue we're tackling is how to crowd power information consumption
2. So tonight we're testing a prototype of our system that aims to give people timelines that provide temporally sorted background information on different topics to alleviate the need to do their own research.
3. So here's what a timeline looks like…. and with that we're ready to start when you are.

Task One:
1. So the first use case of our product that we want you to try out for us is when you are reading an article on the web and wish to view more information on the subject.
2. So here's your browser window with a preloaded website, feel free to read through it and poke around, try things out and when you perform a function the computer will take care of it for you.

Task Two:
1. So the second use case we want you to try out for us is one where you come to the timeline website and want to search for information by a certain topic.
2. So here's the webpage and the two topics we have available to search for in this early prototype are cats and dogs (point to the search topics) so feel free to search either topic, poke around, and let the computer work for you once again.

Task Three:

1. The third use case we want you to try out for us is one where you want to make your own timeline from our website. Here is your current list of timelines and the article url's we have available for you to build with today. So once again poke around and the computer will take care of things for you.

Interview questions

So, thoughts?
What was easy about it?
What did you think of the button?
What'd you think of the Timeline?
Was there anything you wanted to do that you couldn't?
How'd you feel about the search window?
Would you find this useful?
How'd you feel about hot and cold rating?
What'd you think of making a Timeline?

Interview Results

<p style="text-align:center">Lauren</p>

- First use case
  - Studying page, saying ok
  - Seems to be understanding
  - Search what something is ask computer?
  - Reading for 45 seconds, wants to watch video on article
  - Find more about Alexander Pushkin?
  - Can I look at other news that's been going on in Syria around this time?
  - What do I do? (SHARPIE BUTTON!!)
  - On Timeline now (First task)
  - Clicks 4th article within 12 seconds
  - Seems to be smiling, interested
  - Reading article now,
  - Pressed back button, not back on timeline, scanning
  - Reading
  - Clicks on timeline 2 (we explain) she understands
  - Clicks on 2nd article
  - Seems intrigued, seems to understand controls
  - Now reading article again
  - Back button within 10 seconds

- ○ Back on timeline
- ○ All attention to screen
- ○ Clicked on Dots, Presented summary
- ○ Read Summary
- ○ Tried to click summary
- ○ Clicked back on timeline option
- ○ Clicked on 4th article
- ○ Stopped it, she got on all interactions
- ● Searching Timelines
  - ○ Understands task when explained
  - ○ Smiling, small laugh
  - ○ Clicked on dogs
  - ○ Sees timelines on left of page and clicked first one
  - ○ Staring at preview and clicked on preview (specifically the option in preview)
  - ○ Changed search to cats
  - ○ Now shown cats
  - ○ Within second clicked on timeline
  - ○ Tried to click on preview again
  - ○ Understood interface it seems
- ● Making Timeline
  - ○ Presented page and links
  - ○ Drags article to add linke
  - ○ Timeline created
  - ○ Creates another timeline article
  - ○ Timeline created
  - ○ Understands interface relatively well
  - ○ 3rd one created
  - ○ seems concentrated
  - ○ Smiling at end

Thoughts?
Super easy to do everything. I chose dogs first because I like dogs more than cats. I chose the first timeline because of exclamation point.

Button?
Liked it. No inconvenience.

Timeline?
Liked it, good way to search for things online. Good way for me to just get quick background info on new topics.

Anything you wanted to do?
I wanted to click on words.

How feel about search window?
Put in list, few different larger topics to choose from, click then break down of articles that pertain to that. Like database. [what actually was…]

Useful?
Found useful, will there be a base of Timeline's that will be on there? (seems to be worried about lack of search results, understandable). As a study tool it's a nice idea, or perhaps a literature class. Seems optimistic

Feel about hot and cold rating?
Not clear, didn't see. (Highlight these)
Would you trust these public ratings?
Definitely, for sure.

Creating Timeline, describe what it was?
Drag and drop, had topics, not sure where they're coming from. Got the concept.

Wasn't sure how they connected.

Patrick

Task 1
- ● Seems to understand
  - ○ Stumped for 20 seconds, scrolls
  - ○ Scrolling
  - ○ Scrolled to end
  - ○ Not noticing button
  - ○ Other articles on site
  - ○ Recommended? G-Location? Start by researching by proximity on page,
  - ○ IF something particular stuck out to me, click that
  - ○ HINT TO BUTTON GIVEN
  - ○ Button pressed
  - ○ Timeline Shown
  - ○ Clicked summary on first article
  - ○ Swiped away summary
  - ○ Clicked on third summary
  - ○ Reading, nodding, Swiped the summary away
  - ○ Clicked on Tab for different Timeline (explained)
  - ○ Different perspective? Explained, understand
  - ○ Clicked on circle node for article
  - ○ Reading article
- ● Searching Timelines
  - ○ Shown blank search page
  - ○ Explained

- - ○ Chose dogs
    - ○ Studying, clicks on first timeline
    - ○ shown preview
    - ○ Reading
    - ○ Clicks on preview,
    - ○ Clicked on second Timeline
    - ○ Changed the search query
    - ○ Seems to understand intuitively the concept
    - ○ Looking at preview, and nodding
    - ○ "That's cool"
  - ● Creating Timeline
    - ○ Shown base page
    - ○ Clicks on plus button immediately
    - ○ URLS Explained, gets concept quickly, drags right away
    - ○ Article created
    - ○ Creates next article
    - ○ Creates last one, pretty quick creation experience

So, thoughts?
Cool, timeline makes sense, vs traditional news sources, contextual news is better, not fair to expect that people are so informed about a subject, very topical understanding otherwise
Concern: Creating Timelines, quality of content, level of other news sources reach?
Yes some general knowledge, good rely on traditional news, more leverage is better for credibility. Good job at aggregating.
Elaborate?
Brain as objects, not recent type thing. Read about Syria in order that it happened. Not remember what happened before. Don't wanna read about x, y and z just z. Wouldn't know to search for it, rather have topics shown to me and then I can choose vs me having to search.

What did you think of the button?
This button? Didn't know if it was part of computer? Maybe color it? Browser plug in? Makes a lot of sense, solves same issue of in the middle of article wishing you could know more about it.

What'd you think of the Timeline?
I think, makes a lot of sense given people turning to social, and general public laziness and don't want to do anything. Younger people fast quick short attention span, keep them on the same page, seems familiar, just like faceboo. Not a new thing. Like to see what you could with Timelines. Like idea of people doing different timelines. More creative way to use space though (instead of tabs)? Different perspectives, but maybe not essential to do tabs.
Any incentive to people making Timeline? General idea?

Was there anything you wanted to do that you couldn't?

Uhh, maybe natural, watch video? Different interface. No, in terms of reading news and understanding what's going on. Don't want to many different sources. Depends end goal, get back to article to understand it? Or spend more time on   build up> Avg person wants to understand what's happening now, more about current vs what happened a month ago. Then you could advertise, keep your viewers for longer on your own website, get your story and fill Timeline with other people's stuff. Don't think people going through want to read other things more on what they were reading.

How'd you feel about the search window?
Unless specifically for timeline, not used as much vs top feeds. Even if scraping Time, and then playlist of top news stories. Match words with what other people are doing.

Would you find this useful?
Uhh, I think so. Better than most things out here, most people have news source, If Im' looking for news, I have app on phone or I go to New York Times, for generally informed person, they know what they're looking for. Does provide more comprehensive news experiences. 2 major statements. Go to our website and get different consumption, switch so that most recent on top. Contextual consumption of news. Instead of having to scroll all the way to back. Could use button like google has to be good, articles have to be interesting.

How'd you feel about hot and cold rating?
He didn't notice/know what we were talking about. Explained to him what it was.
What I think, want it to be as quick as possible. More time people annoyed by what you're doing, unless create homepage as dest, instead of filling in blanks, seeing extra blanks. Just put best stuff on top, don't over interface it. But if more destination, then makes more sense to have more of analytics. If I'm clicking this, idgaf but if I'm going I want to know what's hot, what Timelines people are creating.

What'd you think of making a Timeline?
Uhh, I think it's for certain consumers, bloggers, reddit users, I'm not one of those people. I'm more person show up and expect it to be there. Such a simple action, My thought , how many people do it?, I don't much myself What might happen, people create their own catalogs to create their own opinion. Save news journals to remember what you've read. Those are the people you want creating because they have an idea of they they're reading. More of a bookkeeping on their part.

In terms of youtube video vs Timeline, how much value to user. Wish you could all be done, idk if those are the people that you're actually gonna get. I don't think you're gonna get a personality on there. I think people more very interested in their own news and who want to share it. Long tilt tip, small amount of people who do it but serves huge amount of people. Maybe compensate at first etc.

Jafar

- Article (Timeline Button)
  - Scrolling…reading…
  - Scrolling…
  - Clicked on the Timeline button
  - Only button right? Yes.
  - Timeline presented
  - Clicked on most recent (bottom of page)
  - Reading article…
  - Pressed back button
  - Notice dots, and click on dots
  - Notices it's all on one topic, sees summary
  - Clicks on tab to display another Timeline (explanation…)
  - Clicked on the 2nd to last summary
  - Reading
  - Clicked on article after summary
  - Reading…smiling…clicked on article, then clicked on back button
  - Really liked it, thought it's really cool
  - Can you have a Timeline for all news? Or for every news?
  - We'll go through that at the end;)
- Searching Timeline
  - Chose dogs immediately
  - Presented new search screen,
  - Clicked on the first timeline
  - Presented preview
  - Reading preview
  - Clicked on preview..explanation, understands
  - Clicked on 2nd one
  - Says how easy it is
- Creating Timeline
  - Presented creation page
  - Immediately clicks on the plus button
  - Presented URLS
  - Smiling, drags URL to new Timeline and sees it's creation
  - Drags next one to the drag box, new timeline created
  - Smiling, seems intrigued
  - Reading…
  - Now adds final link

So, thoughts?
Really easy, liked it, the idea i can see all news in one place is really, really important if I miss something, have to go back and search all events, especially true for sport events, really like to see score for last week, need to go back and read that. If Timeline and press and go there

directly. Likes previews. . Just capture idea . Liked it. Hope, hope all Timelines will create timelines, give meaningful, not crap. Wanted to read about dogs and then diverts

What was easy about it?
Crating Timeline easy. Everything really

What did you think of the button?
First button kind of confusing, maybe first time, except that I think ya everything ok.

What'd you think of the Timeline?
They were ok, real good, liked them, liked the dots. If have different Timelines are they going to be the latest? (thinkin…different timelines for articles that possess that article)

Was there anything you wanted to do that you couldn't?
Thinking….hmmm…maybe oh, so these are all articles only. Can't see comments. Sometimes I go directly to comments, like to see that. If only on article, might like to see other comments. Except that don't know.

How'd you feel about the search window?
Search window was ok, interface is simple. Ya I think it's ok.

Would you find this useful?
Ya, definitely. If it's about sports I would definitely find it useful to catch up on things I've missed.

How'd you feel about hot and cold rating?
Didn't notice it. Oh, I see. I didn't get the jist. Didn't recognize. Assumed for something.

What'd you think of making a Timeline?
I probably wouldn't do that. But might be people who would. Maybe, and do I? Would I go to see other people timeline? If someone professional I will view, if some random guy I probably wouldn't trust his credibility. If someone lists all news it can be biased, I wouldn't trust some random guys news article. I wouldn't trust. But if my friend does, I'd probably trust, depends if I know that guy. Otherwise, I wouldn't go read random, probably wouldn't it too much. But if they were professional I would.