Experiment Report

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January 29th, 2018

For this experiment we were looking to study the user experience of our prototype user interface for our "Spoiled Tomatillos" system. This system is a movie recommendation platform that allows users to discover new films through machine learning algorithms and through friend recommendations. Our product aims to be a system "where Netflix and Facebook meet", Spoiled Tomatillos will allow users to recommend movies to friends and join/create discussion groups with similar movie interests. Both Facebook and Netflix are known for their intuitive and well-designed UIs, so the designs of these systems greatly influenced our design choices.

Even though we are still in the early phases of our design process, we wanted to get user feedback early to ensure that our UI was headed in the right direction. We created rapid "Paper Prototypes" of the website's end-user and admin interface designs and asked study participants to complete three tasks for each of the different front-end views. We observed the participants working through these tasks and made notes on any difficulties they had navigating the prototype. We also looked at at how long it took each respondent to complete the task as well as any questions they had. After the tasks were completed, we asked each participant to fill out a short survey which asked for demographic information (age, major, computer knowledge, etc.) and what their thoughts on the prototype were.

Overall the goal of this study was to learn more about conducting usability studies as well as discover what does and doesn't work in our end user and admin user UI design. This experiment helped us gain insight on what a consumer is looking for when they navigate a webpage.

Can also find PDF scans of our prototypes in the UI Designs folder.

End-User Prototype:
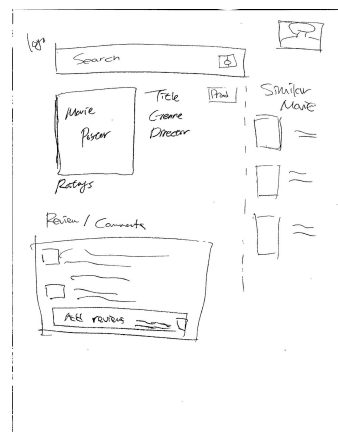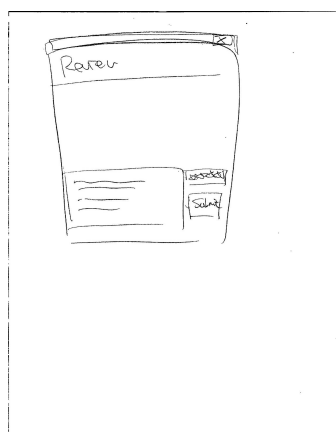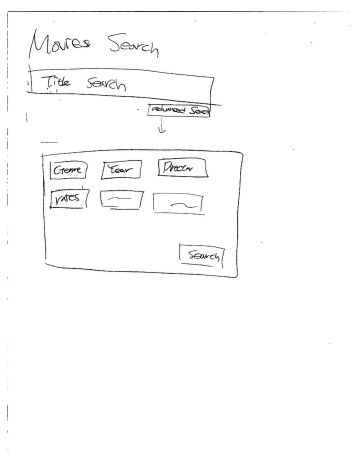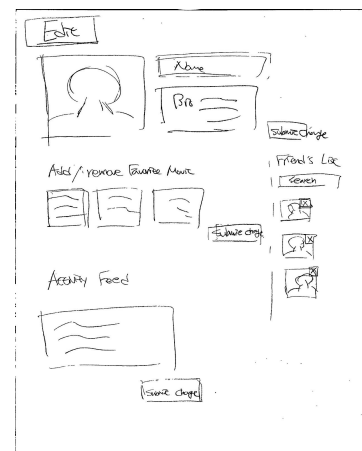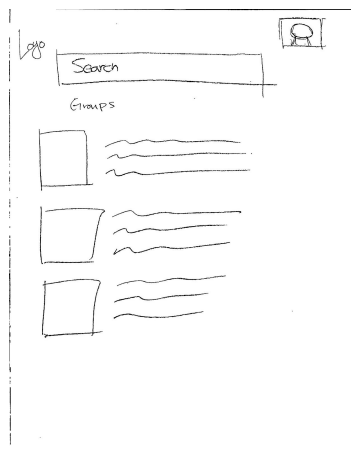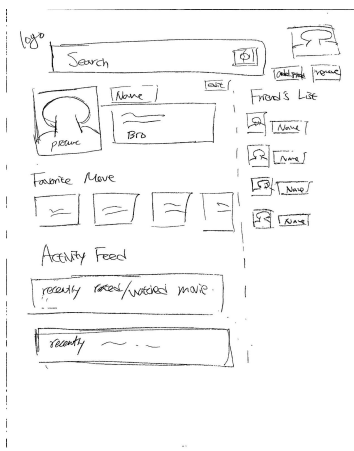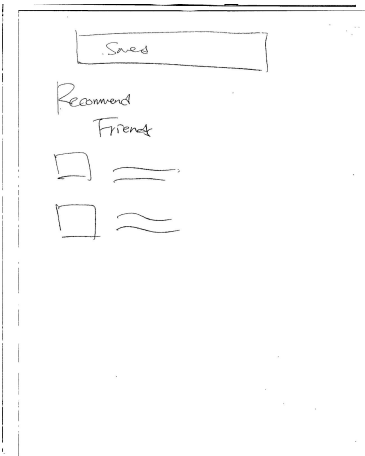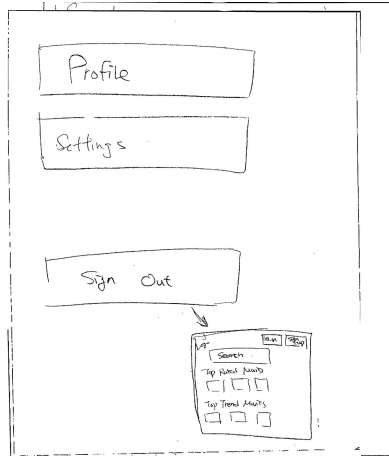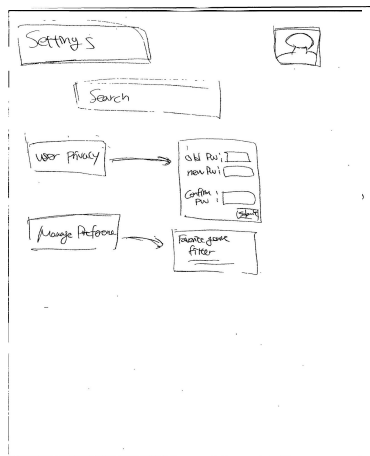
Admin Prototype:
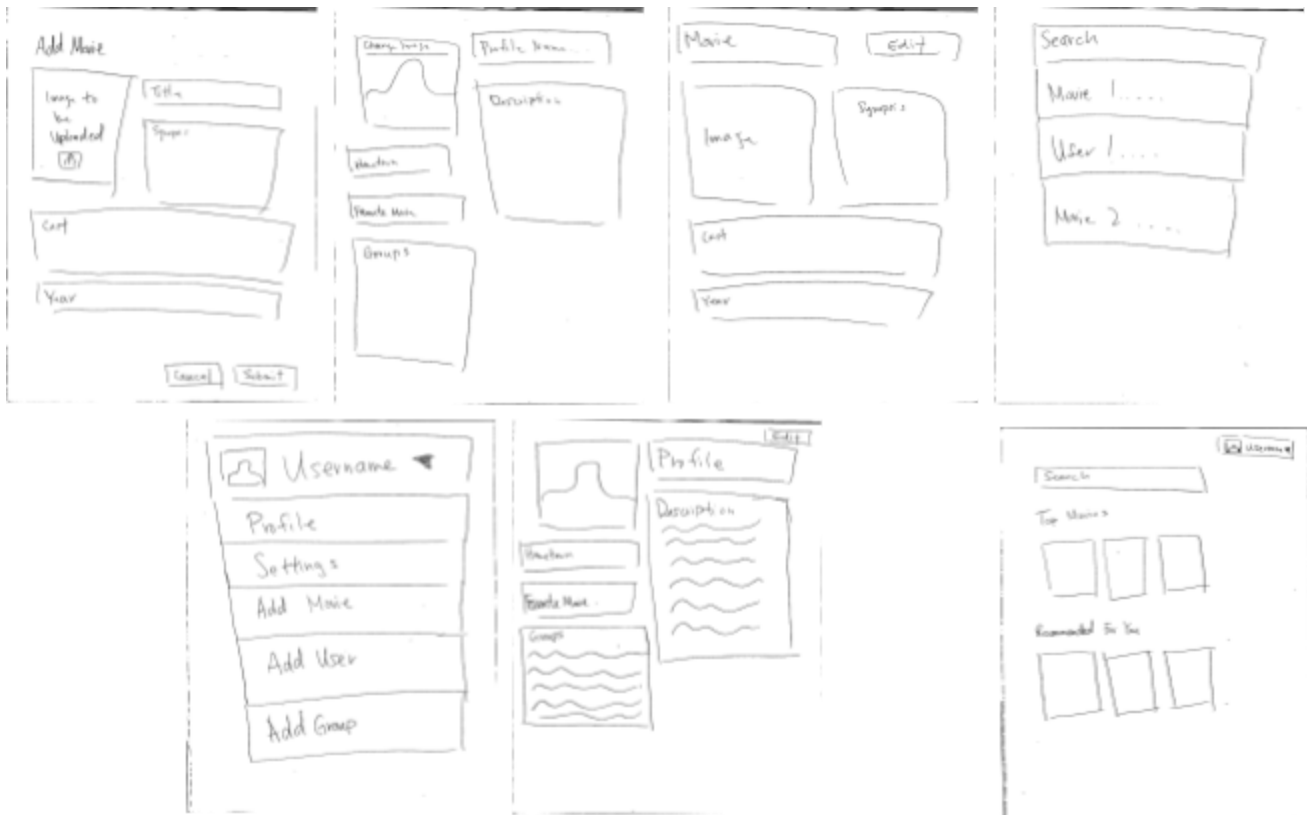
Participants:

Emma Kelly:

- Twenty-two years old
- Undergraduate student at Northeastern University majoring in Psychology
- Familiar with movie-based website (Netflix, IMDb): 10/10
- Technical experience: 5/10

Mimi Kim

- Twenty-two years old
- Undergraduate student at Northeastern University majoring in Finance/Marketing
- Familiar with movie-based website (Netflix, IMDb): 6/10
- Technical experience: 5/10

Sarah Chung

- Twenty-one years old

- Undergraduate student at Northeastern University majoring in Health Science
- Familiar with movie-based website (Netflix, IMDb): 5/10
- Technical experience: 6/10

Christian Chou

- Eighteen years old
- Undergraduate student at Northeastern University majoring in Business
- Familiar with movie-based website (Netflix, IMDb): 8/10
- Technical experience: 6/10

Alan Liu

- Twenty-three years old
- Graduate student at Northeastern University majoring in Biochemistry
- Familiar with movie-based website (Netflix, IMDb): 9/10
- Technical experience: 8/10

Coming up with tasks that captured enough of the user flow while being respectful of our participants time and energy was a fairly difficult endeavor. We wanted actions or tasks that would be short but gather enough information to give us feedback on what does and does not work in our web page design. In the end we created three tasks for both the admin and user UI/UX interfaces.

Admins were first asked to delete a user in the Spoiled Tomatillos prototype. They were then asked to attempted to add a movie into the prototype and afterwards were asked to delete a movie from the service. We believed these tasks were fairly straightforward and definitely experiences we wanted to make intuitive for admins since they would most likely spend a significant amount of time performing these tasks. Because admins are spending more of their time on the website maintaining the server we felt that it was important that our admin design allow them to do easily and efficiently do their jobs. We aimed for a simple design layout so that the tasks become easy to pick up and the website quickly becomes intuitive for the admin to use.

The experience for end users is drastically different. End users are not necessarily reliant on the site and as a result making the interface intuitive was the one key feature we hoped to implement. Too much complexity would end up deterring initial users and become a roadblock in our attempts to gain widespread adoption of our service. The tasks we found important for end users were to rate movies on a movies page in Spoiled Tomatillos, search for a movie on the service, and attempt to edit their personal profile descriptions. Each task should begin from the home page. This set of tasks embodied the core tasks a user interacting with our website would perform which is why we wanted to test out these features to ensure that they were simple and intuitive.

For this assignment was wanted to have some sort of quantified data, so we took two forms of measurement. The first measure was time, we measured how long (in seconds) it took our subjects to complete each task. While we recognize that the paper-state of the prototype could cause these actions to take a little longer, we felt that as long as we kept the experiment

constant the measure could help quantify any struggles participants had. We also took note of how many questions a participant had during each task, this helped up to keep track of where users had question in addition to time.

Our usability study allowed us to gather comprehensive data on how a user might interact with our website. The study allowed us to see what worked and what didn't work. We captured raw data from 5 different individuals: Emma, Mimi, Sarah, Christian and Alan. Below is the raw data we obtained from each individual. Afterwards, we will discuss the data in aggregate. Please note that all individuals willingly participated in this study and signed consent forms.

- Emma Kelley:
    - The study began at 8:15pm, Survey completed at 8:25pm on 1/30/18
    - Was given the end user study
    - Completed use case 1 in 32 seconds and had 2 questions
    - Completed use case 2 in 13 seconds and had 0 questions
    - Completed use case 3 in 66 seconds and had 2 questions
    - Rated the usability of website 9/10
    - Comments:
        - Likes: easy to find the things I was looking for
        - Dislikes: Nothing, it was very straightforward
        - Other: I think a helpful addition could be to add a map that shows all nearby movie theatres, and when you click on each one all of the movies that are playing there show up
- Mimi:
    - The study began around 8:15 pm and survey was completed at 8:29 PM on 1/30/18
    - Was given admin study
    - Rated the usability of website 7/10
    - Completed task 1 in 2 minutes 17 seconds with 5 questions
    - Completed task 2 in 8 seconds with 0 questions
    - Completed task 3 in 27.93 seconds with 0 questions
    - Comments:
        - Likes: Very simple, big fonts, easy to read
        - Dislikes: There was no sidebar for me to view all of my options like Facebook has
- Sarah:
    - Study began around 3:33 pm on 2/1/18
    - Was given end user study
    - Rated the usability of website 10/10
    - Completed task 1 in 90 seconds with 2 questions
    - Completed task 2 in 10 seconds with 0 questions
    - Completed task 3 in 40 seconds with 1 question
    - Comments:
        - Likes: how the main things were the biggest things
        - Dislikes: N/A
        - Other: reminds me of another site

- Christian:
    - Study began around 3:30pm on 2/1/18
    - Was given admin study
    - Rated the usability of website 6/10
    - Completed task 1 in 45 seconds with 2 questions
    - Completed task 2 in 16 seconds with 2 questions
    - Completed task 3 in 40 seconds with 1 question
    - Comments:
        - Likes: Most of it was pretty straight forward, nothing too confusing.
        - Dislikes: The edit movie and add movie pages were a little similar, which can be confusing.
- Alan:
    - Study began around 11 am on 2/1/18
    - Was given end user study
    - Rated the usability of website 8/10
    - Completed task 1 in 63 seconds with 1 question
    - Completed task 2 in 20 seconds with 1 question
    - Completed task 3 in 51 seconds with 1 question
    - Comments:
        - Likes: It does the job, I would use it
        - Dislikes: It seemed like it was missing a lot of features and designs that I'd expect from a modern site
        - Other: Nice site, I'd definitely be interested in signing up for something like this, let me know when it's ready

The above is the raw data that was captured. It is fairly extensive and we believe fairly representative of how intuitive the site is to use. We will discuss the implications of these measurements below.

Based on the results of the experiment, each end user took an average of 62 seconds to complete the first task, which was to rate a movie on the website. Because the data is pretty evenly distributed over the 3 respondents, this provides an accurate assessment of how long it would take someone to learn how to use a basic feature of the site. Continual usage of the website also showed that people learned how to navigate the site more quickly as they became more comfortable with the design. For the third task, the average time taken by each end user was 53 seconds, which is a decrease of around 10 seconds from the first task. These findings are reassuring as this reaffirms our effective implementation of a simple and easy webpage design. Because all of the end user respondents rated themselves as being of mid-level technical competence, this data shows that our website can be easily used by non-technical people. In our feedback, most of the end user surveyed felt that the website was very easy and straightforward to use. The main suggestion was for us to develop additional features, like a sidebar that feeds different movie events or friend updates among other things.

For the admin users, they took an average of 91 seconds to complete the first task, which was to delete a user from the service. While a minute is a long time to figure out how to do a task, an admin is expected to be more technically competent/familiar with the site which is hard

to replicate in our respondents. Also, the user who took 137 seconds for the first task is most likely an outlier and should not be included in the data analysis. However, admin users also showed improvement by the third task, which they completed in an average time of 23.97 seconds. This is a tremendous drop and just shows how easy it is to learn how to navigate the design of our software. The admin users also liked the simple approach of the website as it made it easy to navigate. The one criticism we received from the surveys was that the edit movie and add movie pages were similar, which is confusing for an admin user. Overall, we received similar feedback that we should also expand our website offerings and look into more complicated and flashy features.

Because all of our respondents were non-technical but were able to quickly figure out how to navigate our website, this is promising data. Another important data point is that many respondents were familiar with services like Netflix or Amazon Prime Video and would be interested in seeing a product like Spoiled Tomatillos go live. Thus, the data supports the need for our product. However, because this is such a small sample size, this study merely provides us with a general overview of how our website design is viewed from a consumer perspective.