Noroff
School of technology and digital media

Technical Report

Project Exam 1

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1. Summary

For this project exam we were to plan and create a microsite for SpaceX or NASA to raise awareness about space program activity around the world. I chose to work with SpaceX and used their API documents to create a responsive microsite focusing on the next launches and the goals of SpaceX.

The project lasted 5 weeks which I divided into separate phases to really work in depth with each phase. During the first phase I worked on planning the way I would work and did research. The second phase was focused on defining the target audience, and creating personas and storyboards based on my research. I also created the prototype for the desktop version during this phase. The third week was dedicated to design and creating the final prototype for all devices, I also focused on finding all assets and deciding every design aspect so that I could focus on coding and creating the website during the fourth week.

In this report I am explaining my decisions, reflecting on my process and discussing other important points.

Below you will find a link to the github I created for this project and the link to the microsite.

Github with all documents:
https://github.com/frontalexandraep/alexandra-pettersen-project-exam-1

Link to website:
http://frontalex.com/noroff/semester-2/project-exam/SpaceX/

2. Body

2.1. Introduction

For this project we were to plan and create a microsite for SpaceX or NASA. The goal was to create a microsite that would appeal to a specific target audience with the purpose of raising awareness about space program activity around the world. We had 5 weeks to plan and complete the project, in this report I will reflect on the process and the decisions I made to create the microsite.

2.2. Main section of report

2.2.1. Week 1 - Planning

The first week of the project was the planning phase. The first thing I did was to go through the assignment thoroughly. I made sure that I had read and understood everything before I started researching. When researching I went through the websites of SpaceX and NASA, and the external resources given in the assignment. The research I did at this stage was to decide which brand I would create the microsite for. After researching I decided to create the microsite for SpaceX. I chose SpaceX because they had less media guidelines compared to NASA (f.ex. the use of logo) and they had lots of interesting APIs and information that I could use.

Before I created the planning document, I decided what kind of pages I would create and did some quick sketches. I chose to not include these sketches in this report as they were poorly made. Then I went on to make the project plan and Gantt chart. The project plan I created is the way that I prefer to work and the time that I believed that I would need for each task. The Gantt chart I created was very helpful during these weeks, it helped me stay on track with time and remind me of what I needed to do.

2.2.2. Week 2 - Discovery

The second week of the project was the discovery phase. The first task was to define the target audience. To help me define the target audience I used the websites mentioned in the next paragraph for research and analyzing.

Before jumping into finding the target audience I wanted to learn more about how to define the target audience. I found this great article by Coschedule (ref. 3.1.), it helped me understand the process and how to understand the target market.
I used Similar Web(ref. 3.2.) to analyze the SpaceX website, where I found lots of interesting information such as the traffic overview by countries, referrals, search overview and audience interests. I also used Demographics (ref. 3.3.) to find the demographics of relevant keywords.

The important factors for defining the target audience were: the purpose of the microsite, the results from the Demographics website (appd. 5.1.), the traffic overview by countries and audience interests. Based on my research these are the people who are most likely to use the website:

- Space Enthusiasts. Male. Age: 35-44.
- Rocket Enthusiasts. Male. Age: 25-34.
- Interest in becoming an astronaut. Female. Age: 18-24.

Based on the target audience I created the personas (appd. 5.2.). I wanted the personas to feel real, so I focused on making them detailed including their name, job title, goals, bio, concerns/dislikes etc. Next I created the storyboards (appd. 5.3.), these were to help with understanding how the microsite would be used and how the persona could achieve their goal using the microsite. I created the personas and storyboards with Adobe Illustrator.

Next task was to create the prototype (appd. 5.4.) for the desktop version of the microsite. I made the prototype with Adobe XD as I really enjoy this program. I played around with different ideas and designs. The prototype I created shows the modern, clean and organized design that I wanted for the microsite. *I will discuss more about the prototype in the design section.*

When the prototype was done, I wrote the functional specification. I wrote it in the form of "system must haves", to set the requirements of what the system must be able to do. I chose to deliver this document the second week, because when I had the target audience defined, personas, storyboards and prototype created, I could really analyze the requirements of the microsite.

2.2.3. Week 3 - Design

The third week was dedicated to the design. This phase was basically to prepare everything that I would be needing for the website. First task was to choose the relevant APIs, and then create a plan for the JavaScript. All the APIs I fetched information from was from the SpaceX API Documents (ref. 3.4.). I wrote down what APIs I would use, where I would use them and also what content I would use from the APIs. From there I made a rough plan of how I would be using JavaScript.
Next I decided on a color scheme, the colors that I chose were based on what I associate with astronauts/space travel - different hues of blue and white. When I was creating the prototype I got a pretty good idea of what kind of typography I would be using. I used sans serif fonts (ref. 3.5.) for both headings and text, these worked well together and helped create that modern and minimalistic feeling. When all the design decisions were made, I created a style tile (appd. 5.5.) - including the color scheme, typography, navigation examples etc.

Next I found all the other content that I would be needing, such as icons, images, written content etc. The written content that is not from an API call, is from wikipedia and the SpaceX website.

I went on to create the final prototype for all devices in Adobe XD (appd. 5.4.). Unfortunately I saved the new prototype on the same link as the old prototype, but there were only some small changes here and there. The design and content I chose allows the users to easily understand what they can achieve on the microsite. The SpaceX microsite that I created will inform and update people of different ages about the space activity that is happening around the world, and also include other content surrounding the topic - therefore I thought it would be relevant to have a page about their rockets. I created an organized information architecture that everyone could understand and use, and having the countdown on the homepage communicates what the website is about to the users. The navigation is clear and easy to see, and it is easy to move from page to page. The interface design adapts to the different screen sizes, and gives you the same information on all devices, so that there won't be any unpleasant surprises when used on different screens.

2.2.4. Week 4 - Development

The fourth week of the project was the development phase. I decided to work the same way that I had worked with the course assignment in Interaction Design, as that was a productive and organized way for me to work. I started with the homepage, wrote all of the HTML, CSS and JS, and continued this process with the five pages. I used the Chrome DevTools during this whole process to test the responsiveness. When all the five pages were done, I went through all of the coding thoroughly and then uploaded all the files with FileZilla. I tested the website on my phone, used Chrome DevTools to check it as a tablet and tested it on several bigger screens - while I was testing the website on several devices I wrote down some

changes that I needed to make, such as font sizes, margins etc. Then I went back into the code and did all the changes that were necessary. Before I uploaded the changed code, I validated it using the W3C validator and the Google Structured Data Testing Tool - to make sure that the code was clean and free of errors.

I decided to use JavaScript on four of the pages - for the countdown, launch schedule and the contact form. As mentioned earlier I used the SpaceX API documents, which were very detailed and had great information that was relevant to the microsite. The countdown on the homepage was very important for me, and I had to do lots of research and "try-and-fail" before I managed to get the correct result. The W3Schools' guide on how to create a countdown timer was a lifesaver. I wanted some sort of loader on the pages where I would fetch a lot of information from an API, and I found these great HTML/CSS loaders from loading.io which were easy to change into the style I wanted.

I chose to use three external cascading style sheets to keep all the styling organized and to keep from duplicating styles. The style.css is for all of the general styling, and the other two are more specific. The cardstyles.css is for the launch schedule and rockets page. The infostyles.css is for the about page and the contact form.

2.2.4.1. Persuasive techniques & Affordances

To persuade the users to stay on the website for as long as possible I added buttons where needed, such as the "View More" and "Learn More" on the homepage and also having the "arrow-up" button on the bottom of each page to create a good flow for the users. The website has a modern and updated look, and has the social media and website of SpaceX in the footer which adds to the site's credibility.

On my website I have both explicit affordances and implicit affordances. The buttons on the homepage and the “submit” button in the contact form are explicit affordances, meaning that they are designed as interactive, clickable elements. The users understand that they can click them, and in case the users are in doubt the buttons change on hover. The labels in the contact form help the users understand what to write where, and communicates what is required in order to submit the form. The buttons return feedback - the buttons on the homepage sends you to a new page and the “submit” button tells you if your message has been successfully sent. The dropdown menu for the smaller screens is an example of an implicit affordance. They are not as obvious as explicit affordances, as they are hidden and revealed only if clicked.

2.2.4.2. SEO & WCAG

To increase the visibility of my website I have made sure that each page has unique meta tags, such as unique titles, descriptions and keywords. The meta tags tell the search engines what the website is about. The image tags also play an important role, giving the images descriptive alt tags help them appear in the search results and also improves the accessibility of the website.

I tested my website’s accessibility with the WAVE web accessibility evaluation tool. It is the first time I have used this tool, and it is a great tool. It tells you if there are any errors in your code, shows you the structure of your site and also if there are any contrast errors. I checked all of the pages of my website and the only error it could find was that there is no label for the email input in the footer, but I left that out on purpose as I have a placeholder and it would look cluttered and “out of place” if there was a label there.

2.3. Conclusion

This project has been very interesting, and it has been a great experience to work thoroughly and in detail with each phase of the website development. I feel like I answered the assignment well, by creating a responsive microsite that has a live feed of launches and a table of past launches around the world, and that also includes information about SpaceX and their goals. The website looks and works like the prototype, and I am very pleased with the final result and design.

3. References

3.1. Coschedule, “How to find your target audience”, 2016. Internet: https://coschedule.com/blog/how-to-find-your-target-audience/ [Accessed: 27- April- 2020]

3.2. SimilarWeb, Analytics. Internet: https://www.similarweb.com/website/spacex.com [Accessed: 27- April- 2020]

3.3. Demographics, Search Engine User Demographics. Internet: https://demographics.io/ [Accessed: 27- April- 2020]

3.4. SpaceX API Documents. Internet: https://docs.spacexdata.com/?version=latest#eda45a06-9f05-40f1-a333-028f647ba797

3.5. Typography:
League Gothic. Internet: https://www.fontsquirrel.com/fonts/league-gothic
Roboto. Internet: https://fonts.google.com/specimen/Roboto?query=roboto

4. Bibliography

4.1. Icons used on the website

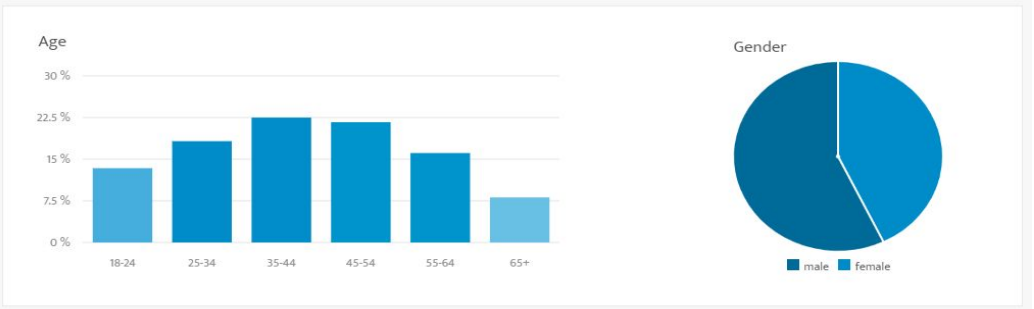
- Internet: https://www.flaticon.com/

4.2. Written content on the “About” page

- Internet: https://www.spacex.com/
- Internet: https://en.wikipedia.org/wiki/SpaceX

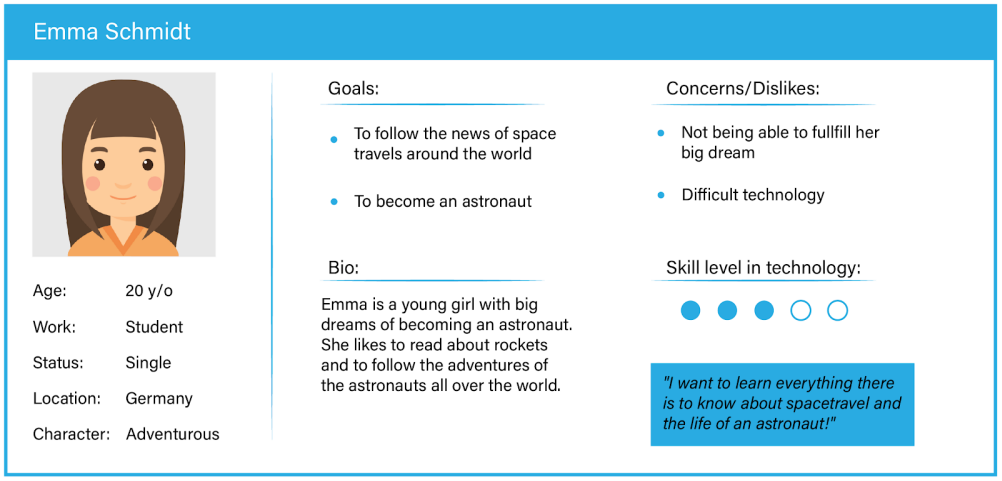
5. Appendices

5.1. Results from Demographics.io:



Keyword	18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65+	Male	Female
astronaut	12.60%	19.44%	24.75%	22.23%	14.69%	6.31%	47.76%	52.24%
astronomy	12.18%	15.17%	20.54%	22.66%	19.35%	10.10%	51.32%	48.68%
rocket	13.06%	18.95%	25.02%	21.79%	13.80%	7.38%	52.91%	47.09%
rocket science	12.63%	21.06%	18.86%	21.56%	19.83%	6.07%	60.83%	39.17%
space	14.90%	19.75%	22.97%	20.93%	14.51%	6.93%	61.15%	38.85%
space exploration	15.49%	19.55%	20.90%	20.64%	16.13%	7.29%	56.57%	43.43%
space station	7.47%	11.41%	18.27%	23.25%	23.03%	16.57%	61.34%	38.66%
space travel	10.15%	19.91%	23.90%	23.00%	16.89%	6.15%	61.49%	38.51%
spaceflight	8.11%	12.53%	18.17%	26.89%	27.39%	6.91%	77.25%	22.75%

5.2. Personas



Liam Miller

Age: 36 y/o

Work: Software Engineer

Status: Married

Location: USA

Character: Tech Savvy

Goals:

- To follow the news of rocket launches
- To follow the latest in space technology

Bio:

Liam is a family guy and a tech geek. He likes to follow the newest in space technology and is a real space enthusiast.

Concerns/Dislikes:

- Poor design
- Slow internet connection

Skill level in technology:

●●●●●

"I always follow the upcoming launches so I can watch them with my 2 sons."

Oliver Tremblay

Age: 27 y/o

Work: Intern

Status: Single

Location: Canada

Character: Practical

Goals:

- To follow the news of rockets and space travels
- To become a top-notch aerospace engineer

Bio:

Oliver is working as an intern to become an aerospace engineer. He likes to read about the different rockets that exist and to follow up on upcoming launches.

Concerns/Dislikes:

- Not being able to keep track of the newest in rocket technology
- Not working with his hands

Skill level in technology:

●●●●○

"I have always been a real rocket enthusiast. I love those intricate machines!"

5.3. Storyboards

Using the launch schedule

Liam wants to watch the next rocket launch with his sons. But he doesn't know when it is.

Liam knows that the SpaceX micro-site has a launch schedule. So he enters the website.

Liam finds the information he needs by using the list of upcoming launches.

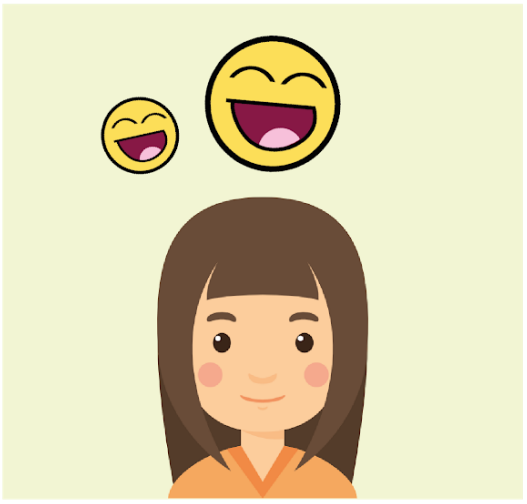
Liam is happy to find this information and is looking forward to watch the next launch with his sons!

Sending in a question

As an aspiring astronaut Emma has some questions she would like to ask a professional.

Emma enters the SpaceX microsite.

Emma finds her way to the contact page and writes her questions down in the form.

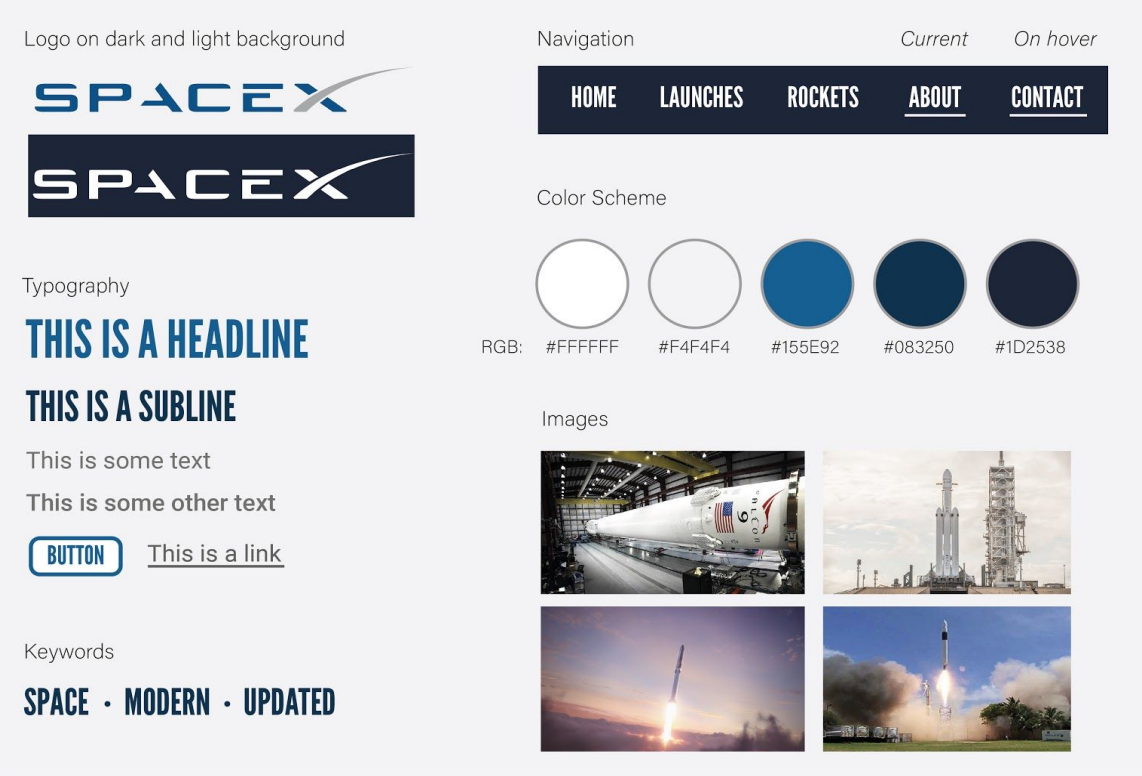


Emma is now waiting excitedly for the answers to her questions.

5.4. Prototype for all devices:

https://xd.adobe.com/view/8457e5ed-32a3-4032-5687-bf9b324cfd85-f266/grid/

5.5. Style tile:



5.6. Other design ideas for the homepage