TikTok-Brain

Lo-fi Prototyping and Usability Testing

Mission Statement

To promote stair safety by leveraging the captivating power of video, delivering crucial safety messages in an engaging and distraction-free platform.

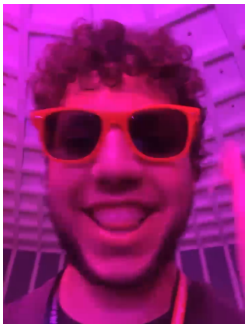
Value Proposition

Delivering mesmerizing, randomized videos paired with essential safety advisories, TikTok-Brain simplifies social media to focus solely on enhancing personal safety without the clutter of likes, comments, or shares.

Problem / Solution Overview

Many individuals are unaware of the risks associated with inattentive stair use. Traditional safety messages often fail to engage audiences, leading to continued accidents and injuries. TikTok-Brain combines the engaging nature of short-form video content with critical safety messaging. By removing typical social media distractions, the app ensures that users receive and retain important information about walking safely on stairs.

Our Team



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1 Introduction

Distracted walking has become a significant safety concern, particularly on stairs where attention is crucial. Traditional social media platforms, designed for high engagement, inadvertently increase these risks by encouraging users to focus more on their screens than their surroundings.

TikTok-Brain is designed to counteract this issue by combining the engaging nature of video content with crucial safety messages about walking safely on stairs. This app simplifies the social media model: it removes likes, comments, and shares, focusing solely on delivering safety-oriented content through mesmerizing, randomized videos paired with safety advisories.

2 Methodology

The process began with an individual brainstorming phase, where each team member independently generated ideas. These ideas were then collectively refined using digital tools such as LaTeX, Gimp, and Krita, resulting in a diverse array of 25 to 30 potential concepts.

To ensure our ideas were aligned with user needs and expectations, we proceeded to create and conduct a detailed survey comprising 20 questions, which was administered to 30 participants using Telekom Vote 2 and WhatsApp to reach out to the participants. The results helped constructing personas and refine our initial ideas.

With a solid understanding of our user base, we evaluated the brainstormed ideas through a structured pro-contra analysis, taking into account the feedback and personas developed earlier. This phase of assessment was supported by Markdown and LaTeX, allowing us to narrow down our options to three final ideas.

Subsequently, we moved to visually conceptualize these ideas through sketches and storyboards, utilizing Gimp, other graphic tools, and Kdenlive. This step was to visualize the sequence and flow of interactions, which were used for the later stages of prototyping.

In a presentation to gather user feedback, participants evaluated the top three ideas from each of six groups, totaling 21 ideas. Each of the 25 attendees had two votes to allocate, allowing them to identify the concepts they found most compelling. This iterative process of development and refinement led to the selection of the most promising prototype based on its functionality and user feedback.

The final stage of our project involved the creation of professional presentations and a comprehensive final report, crafted using PowerPoint and LaTeX. These documents provided a detailed overview of the project process, from the initial concept to the final evaluation of the prototype.

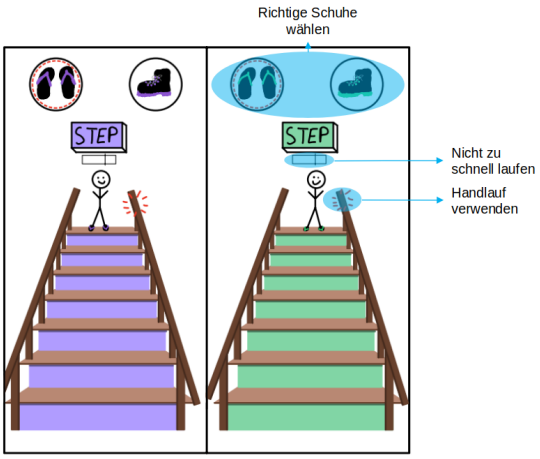
3 Results

This chapter presents the progression from the already refined concept sketches to the final prototype, detailing the design decisions, evaluations, and functionality development.

3.1 Concept Sketches

The top 3 of our ideas were:

1. **Stair Master:** a versus game where the player has to climb stairs efficiently and safe.
2. **StAIr:** an AI image generator where people falling down the stairs with safety prompts embedded.
3. **TikTok-Brain:** daily TikTok brainrot bundled inside an application to focus on safety prompts.



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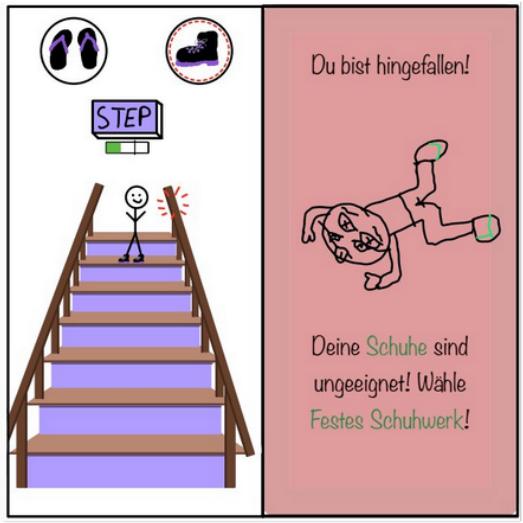

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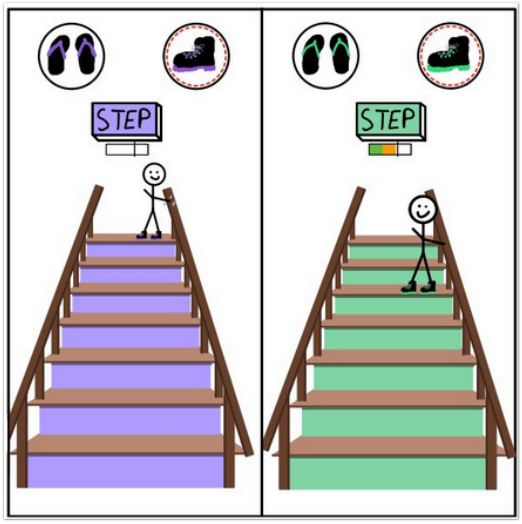

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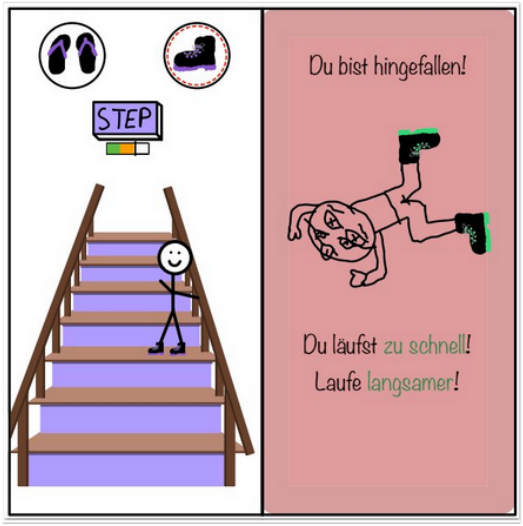

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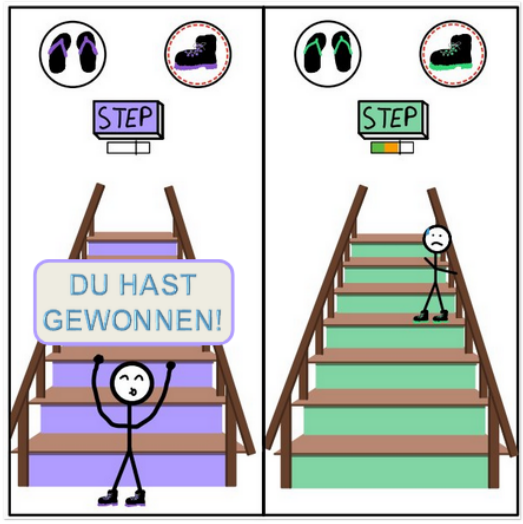

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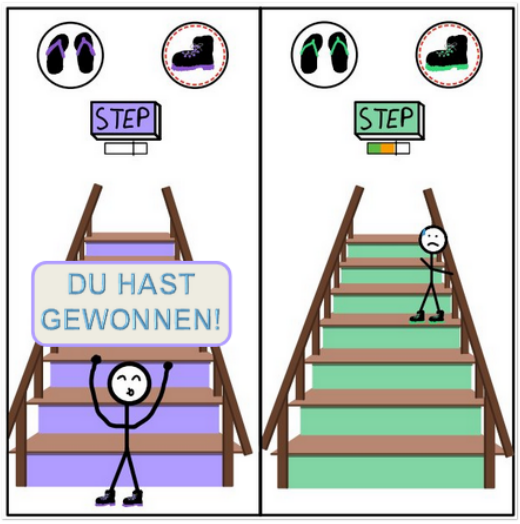


(f) 6

Figure 1: Stair Master Game

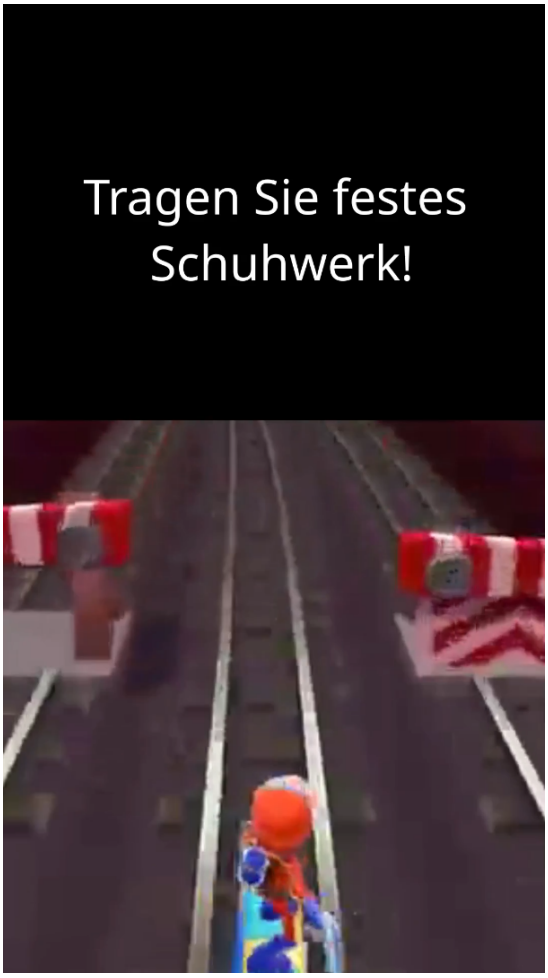
(a) 1

(b) 2

(c) 3

Figure 2: StAIr AI Image Generation

(a) 1



(b) 2

Figure 3: TikTok-Brain

3.2 Selected Interface Designs

Stair Master Game (1 vote)

Pros	Cons
• The majority enjoys playing minigames • Social Gaming Interest • Gaming Engagement	• Does not catch much interest • Few positiv feedback

Table 1: Pro + Con analysis for rewards interface

StAIr AI Image Generator (2 votes)

Pros	Cons
• Humor Preference • Catches attention because of AI use • Simple User-Interface	• Humor is subjective • Potential Insensitivity • Attention may only focus on AI

Table 2: Pro + Con analysis for rewards interface

Stair TikTok-Brain (11 votes)

Pros	Cons
• High Engagement with Memes and Humor • Everyone spends time on short-form streamer daily • Clear Warning Placement	• Lower Engagement with Short-form Video • Attention may only focus on videos

Table 3: Pro + Con analysis for rewards interface

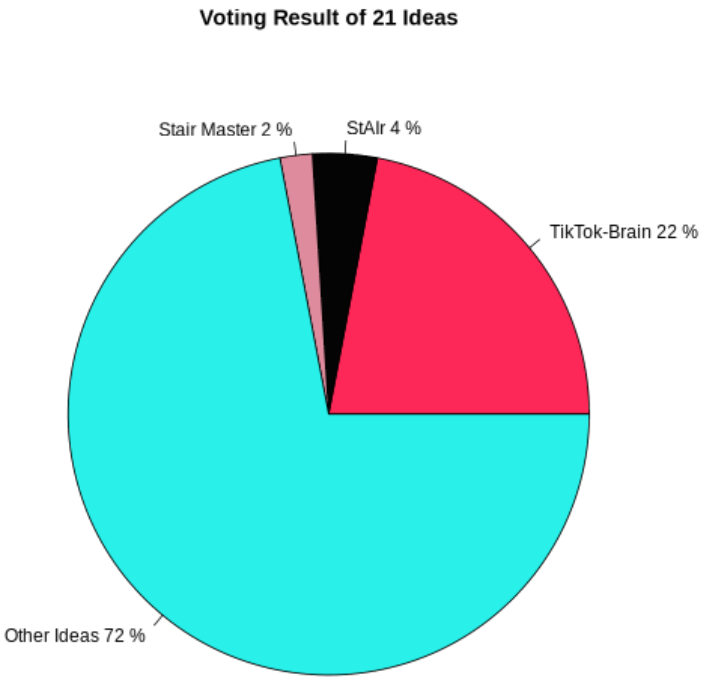


Figure 4: Presentation Voting Results

3.3 Prototyping

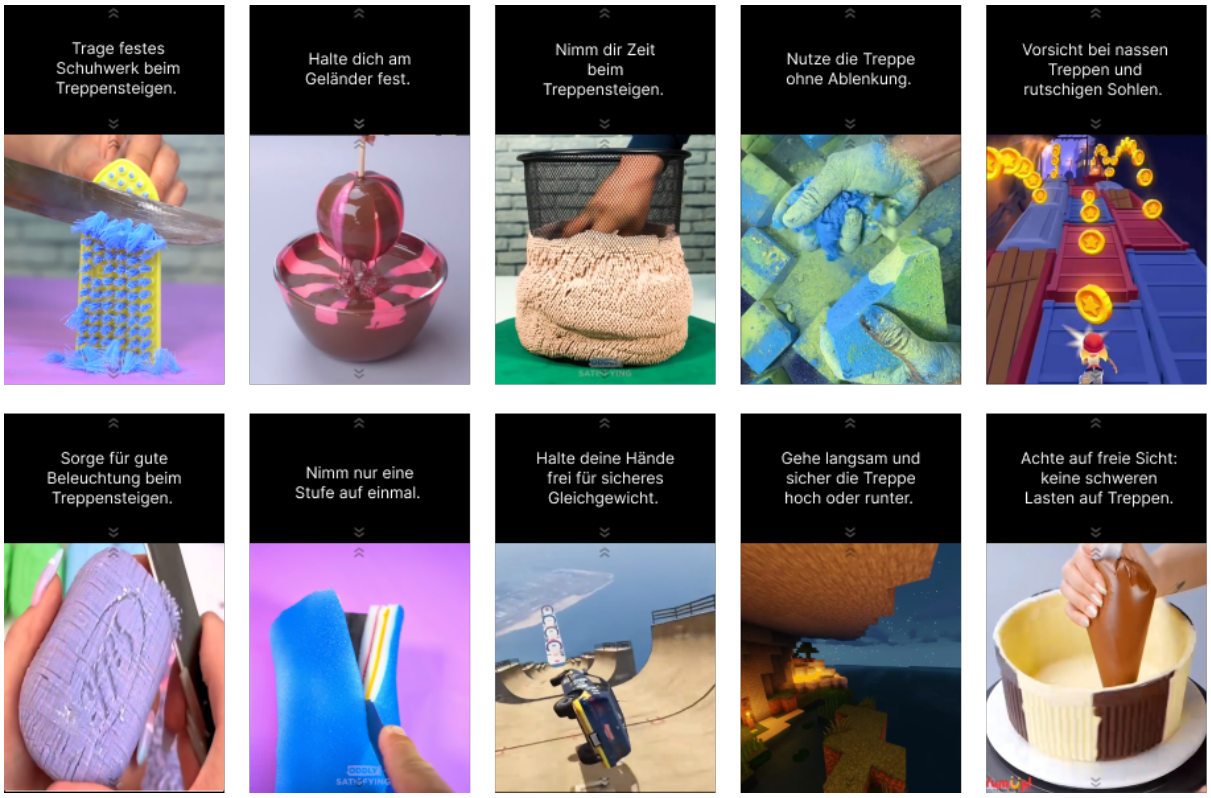


Figure 5: Lo-fi Prototype of TikTok-Brain Platform Interactions

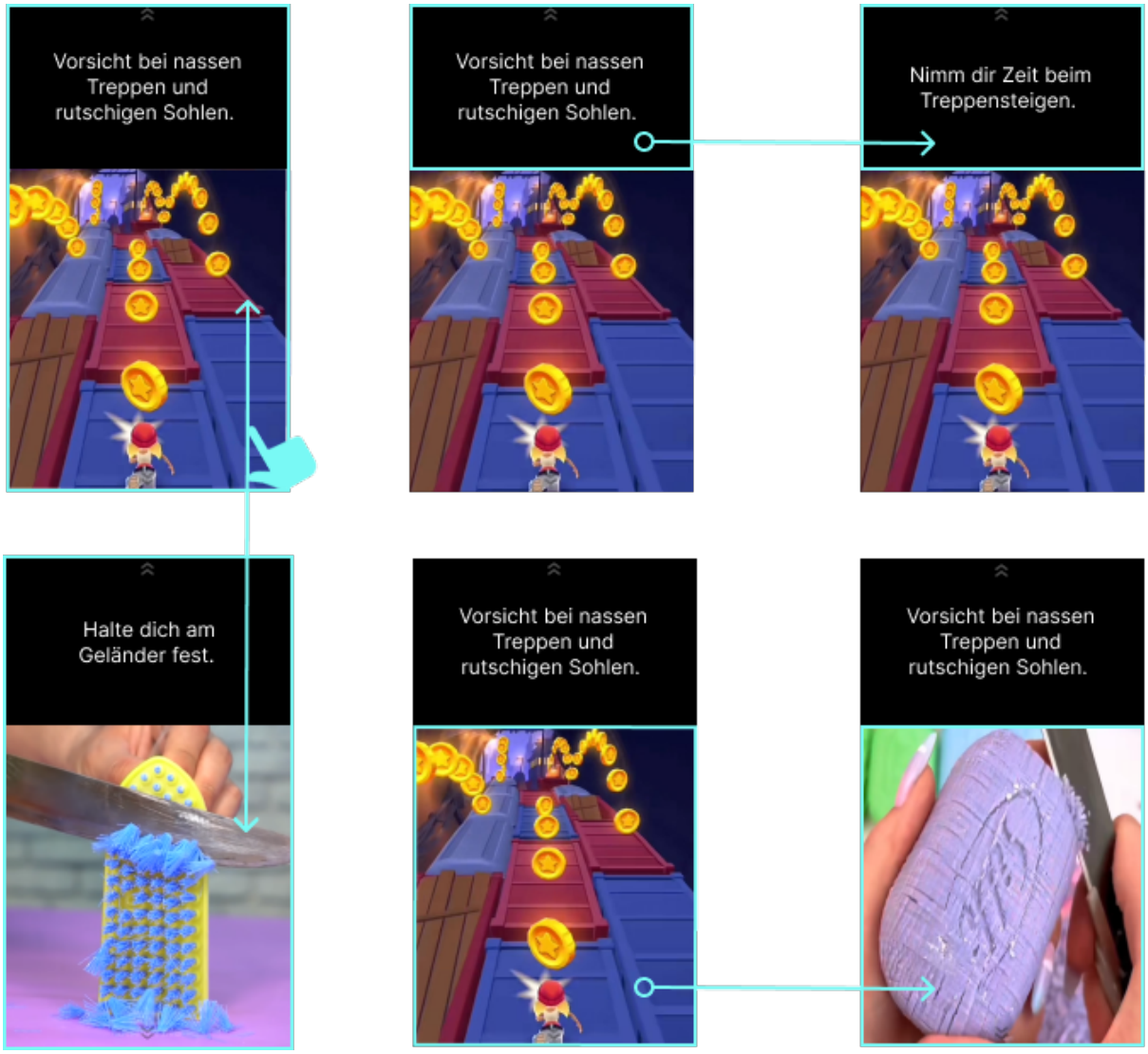


Figure 6: Lo-fi Prototype of TikTok-Brain Platform Example Views

Component	Description	Functionality
Video Display Area	Fullscreen area to show videos.	Displays a single video at a time, taking up the bottom part of the screen.
Swipe Navigation	Gesture-based navigation for moving through videos.	Swiping up loads the next video; swiping down loads the previous video.
Random Video Loader	Logic that fetches a random video to display.	Randomly selects and loads a video from the video pool whenever a new video is required.
Text Overlay Area	Area at the top of the screen for text that accompanies each video.	Displays a random line of text (e.g., a phrase or quote) that's paired with the video.
Video-Text Randomizer	Logic that pairs random videos with random text.	Ensures that each video is matched with a different text overlay each time it appears, maintaining freshness.
Interface Background	Background color or visual design behind the video display.	Provides visual consistency or mood but stays unobtrusive to keep focus on video and text content.
Loading Indicator	Small icon or animation that shows when new content is being loaded.	Briefly appears when the app fetches a new random video or reloads the feed.
No Interaction Buttons	No buttons for like, comment, or share, emphasizing simplicity.	Only swipe gestures are recognized; no additional UI elements for social interactions.
Error Handling Display	Fallback message or visual when loading fails.	Displays an error message if a video fails to load, with a prompt to restart the application.
Auto Swipe Animation	Animation that mimics a swipe if there's no interaction for a while.	After a set period of inactivity, automatically performs a swipe animation to move to the next video, keeping the experience engaging.

Table 4: Functionality of Design Interface Components

4 Project Report

4.1 Lessons Learned

Throughout the TikTok-Brain project, there have been several valuable insights that will influence future work practices. The use of iterative design and continuous user feedback have greatly helped to improve our concept and demonstrated that early and frequent user involvement leads to more effective solutions. The structured approach for the generation of ideas, starting from individual brainstorming before moving to collective refinement, has shown how the combination of independent thinking with collaborative evaluation can create more diverse and innovative concepts. A particularly valuable lesson was the importance of simplification: by removing traditional elements of social media such as likes and comments, we have created a more focused user experience that better serves our main goal of promoting security. The progresson from survey-based research to persona development, followed by a structured

pro-contra analysis, has provided a solid framework for the decision-making process which can be applied to future projects. We have also learned that even seemingly simple applications benefit from in-depth usability tests, as user interactions often reveal unexpected insights into interface design and content delivery. The project highlighted the challenge of balancing engagement with educational content and taught us that entertainment and learning are not neccessarily mutually exclusive when properly integrated. Furthermore, the experience of working with various digital tools (LaTeX, Gimp, Krita) has emphasized the importance of choosing suitable technologies for different phases of any project. Moving forward, the creation of detailed documentation throughout the development process, and not just in the end, will be essential to maintain the clarity of the project and allow effective team communication.

4.2 Capacity Plan

One significant aspect that emerged during the planning and execution phases of our project was the initial miscalculation of available capacity. While the project plan was developed with the assumption of a maximum capacity of 200 hours, we discovered during implementation that the actual working capacity was only 160 hours. This discrepancy necessitated adjustments in time allocation and prioritization across various tasks. The detailed breakdown of planned versus actual time, along with results for each task, is presented in Table 5.

The table highlights variances in specific activities where the actual time was either reduced due to capacity constraints, required less time than anticipated, or exceeded the plan due to unforeseen complexities. For instance, while sketching and storyboarding were initially planned for 30 hours, only 12 hours were spent due to reprioritization. Similarly, the time allocated to presentations and reports was significantly reduced due to the shorter presentation time, which was only discussed after the capacity plan was created. Despite these challenges, the adjustments ensured that the project objectives were met within the revised capacity limits.

Tasks	Results	Planned Time	Actual Time
Idea Development	25 - 30 ideas	26 hours • 20-30h idea development • 6h refinement	29 hours • 20h idea development • 9h refinement
Creating and Conducting Interviews	20-question interview, Personas	12 hours • 4.5h create interview • 1.5h conduct • 3h analyze • 3h Personas	13 hours • 5h create interview • 2h conduct • 3h analyze • 3h Personas
Pro - Con and Narrowing Down	3 final ideas	7.5 hours • 6h Pro - Con analysis • 1.5h narrowing down	6 hours • 5h Pro - Con analysis • 1h narrowing down
Sketches and Storyboards	Detailed storyboards	30 hours • 15h sketches • 15h storyboards	12 hours • 12h sketches
Prototype Development and Evaluation	Best prototype selected	24 hours • 9h creation • 15h evaluation and finalization	21 hours • 9h creation • 12h evaluation and finalization
Presentations and Report	Professional presentations and final report	74 hours • 30h first presentation • 24h final presentation • 20h report creation	58.5 hours • 13.5h first presentation • 9h final presentation • 36h report creation
Buffer		∼25h	∼20.5h
Total Time		∼173.5h	∼139.5h

Table 5: Capacity plan