



# 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.

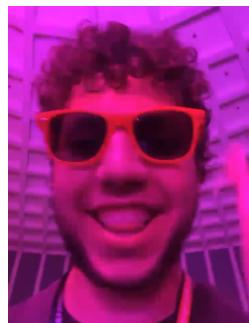
## Value Proposition

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 Method and Review

For identify the exact problem and developing a solution, we used the double diamond method. The double diamand method is orginally a part of the design thinking business and has a user-oriented approach. Therefore one of its key elements are mockups and prototypes, which are needed to get real user feedback in the ongoing development process. The double diamand method has four phases guiding the team from problem identify to a real solution.

The first phase is the 'Discover'-Phase, which is meant for getting more insight into the problem and gather information that may be essential for developing a solution. In our project 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. Moreover we explained each other why we created given ideas always focusing on the expected user behave.

Finished with the first phase, we started right into the second phase of the double diamond method. In the 'Define'-Phase the gathered information should be filtert and first possible solutions reconsidered critical. 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.

As part of the third phase, the 'Develop'-Phase we started the actual design process. All three ideas were laying down to a easy user experience, which was also the key aspect while designing. 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.

In the last phase, the 'Delivery'-Phase we fully completed our most promising prototyp and did some improvements regarding design and interactions of the prototyp based and the user feedback. The final stage of our project also 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.

### 2.1 Review

The Double Diamand method is suitable for developing a lofi prototype. The individual phases and steps felt intuitive and promoted consistent progress. The method does not specify concrete tasks, but divides the entire development process into thematic phases. As a result, it requires minimal organisational time. The 'Discover' and 'Define' phases provide a good basis for inventing new creative ideas and rethinking and redefining old ones. Through these phases, you iteratively reflect on what the user wants and how the user acts. This allows ideas to be adapted, improved and reinvented. This consistently and proactively prevents a solution from being developed that does not appeal to the user. To summarise, the Double Diamond method felt intuitive and very agile when developing a Lofi prototype. Since there is no strict

procedure, but rather a generic approach, the Double Diamond method feels more like guidelines that teams can follow to develop a product or solution that is orientated towards the users.

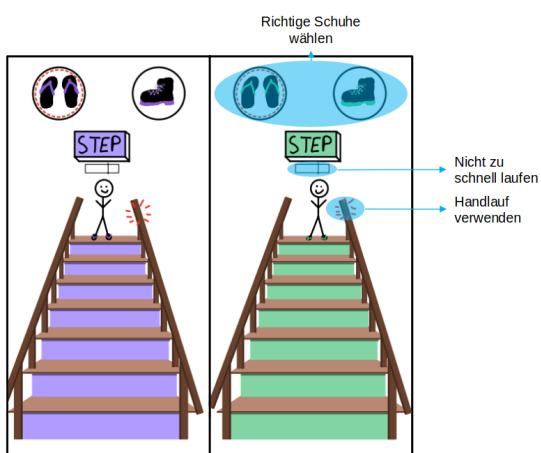
## 3 Results

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

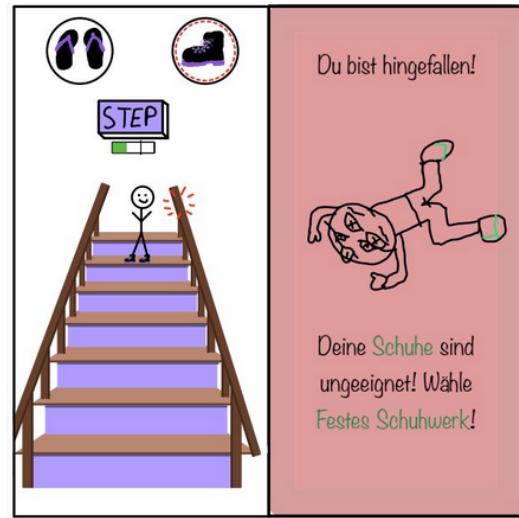
### 3.1 Concept Sketches

The top 3 of our ideas were:

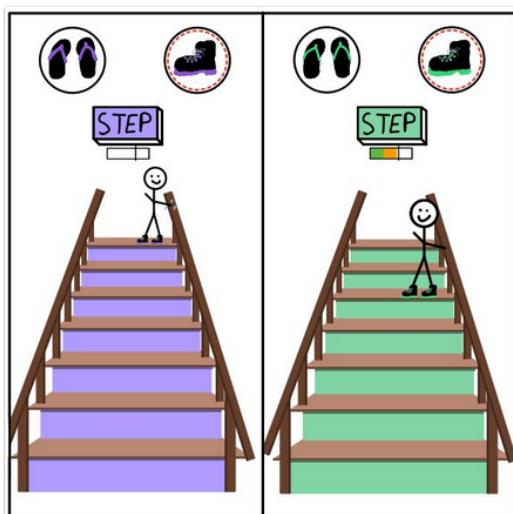
1. **Stair Master:** a versus game where the player has to climb stairs efficiently and safe.
2. **StAIR:** an AI image generator where people falling down the stairs with safety prompts embedded.
3. **TikTok-Brain:** daily TikTok brainrot bundled inside an application to focus on safety prompts.



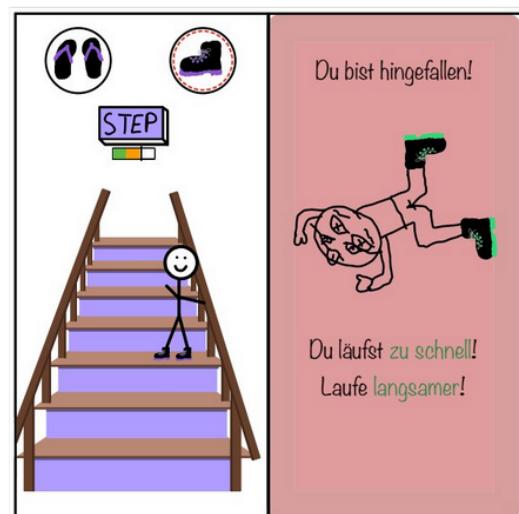
(a) 1



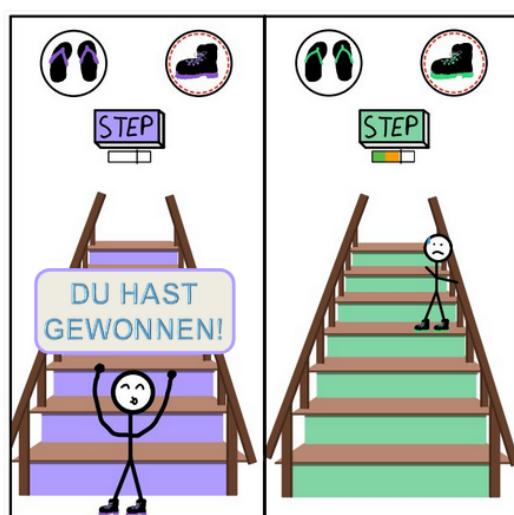
(b) 2



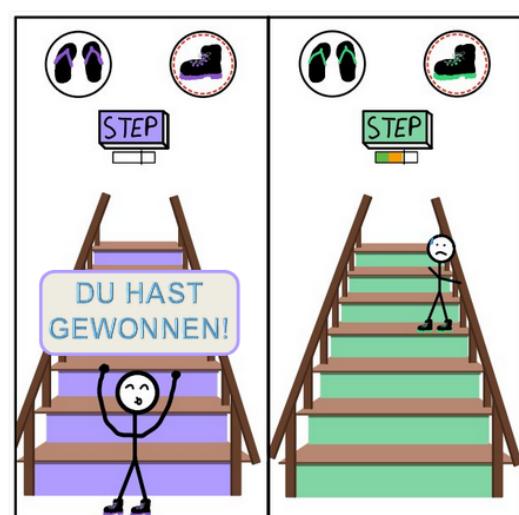
(c) 3



(d) 4



(e) 5



(f) 6

Figure 1: Stair Master Game



(a) 1



(b) 2

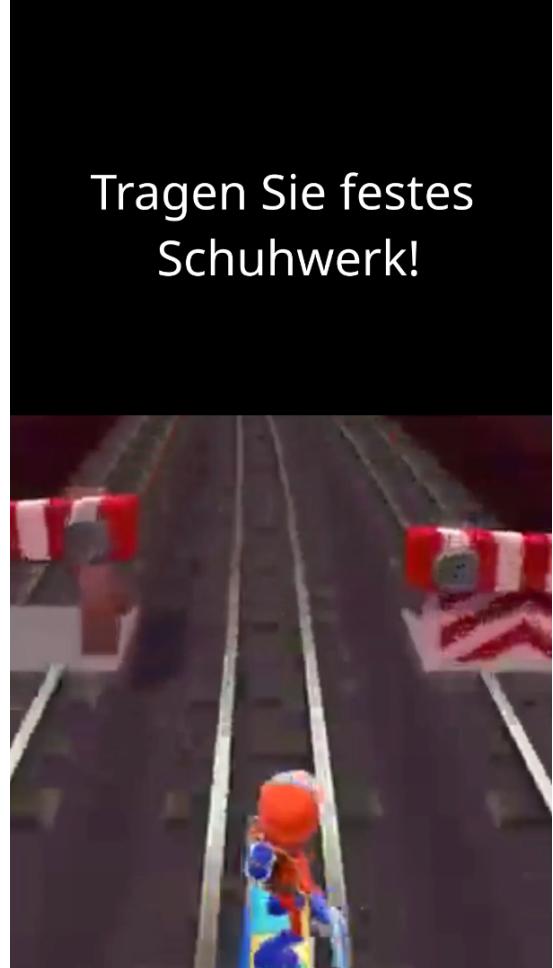


(c) 3

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
<ul style="list-style-type: none"><li>• The majority enjoys playing minigames</li><li>• Social Gaming Interest</li><li>• Gaming Engagement</li></ul>	<ul style="list-style-type: none"><li>• Does not catch much interest</li><li>• Few positive feedback</li></ul>

Table 1: Pro + Con analysis for rewards interface

### StAIR AI Image Generator (2 votes)

Pros	Cons
<ul style="list-style-type: none"><li>• Humor Preference</li><li>• Catches attention because of AI use</li><li>• Simple User-Interface</li></ul>	<ul style="list-style-type: none"><li>• Humor is subjective</li><li>• Potential Insensitivity</li><li>• Attention may only focus on AI</li></ul>

Table 2: Pro + Con analysis for rewards interface

### Stair TikTok-Brain (11 votes)

Pros	Cons
<ul style="list-style-type: none"><li>• High Engagement with Memes and Humor</li><li>• Everyone spends time on short-form streamer daily</li><li>• Clear Warning Placement</li></ul>	<ul style="list-style-type: none"><li>• Lower Engagement with Short-form Video</li><li>• Attention may only focus on videos</li></ul>

Table 3: Pro + Con analysis for rewards interface

**Voting Result of 21 Ideas**

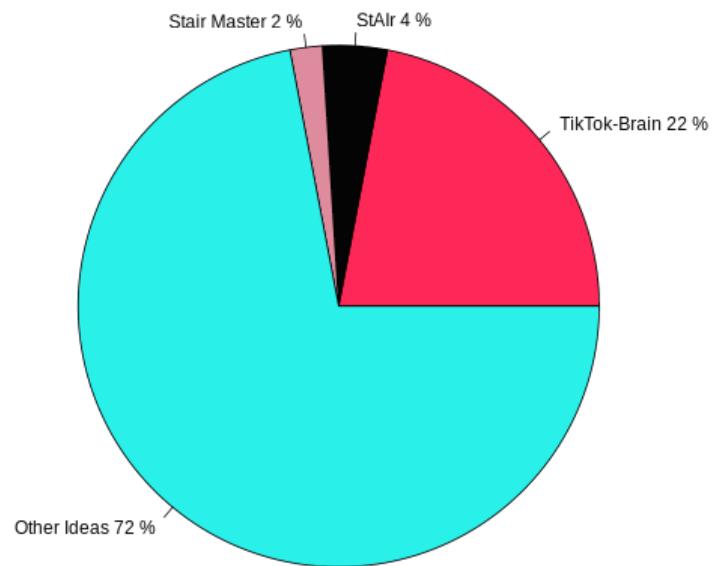


Figure 4: Presentation Voting Results

### 3.3 Prototyping

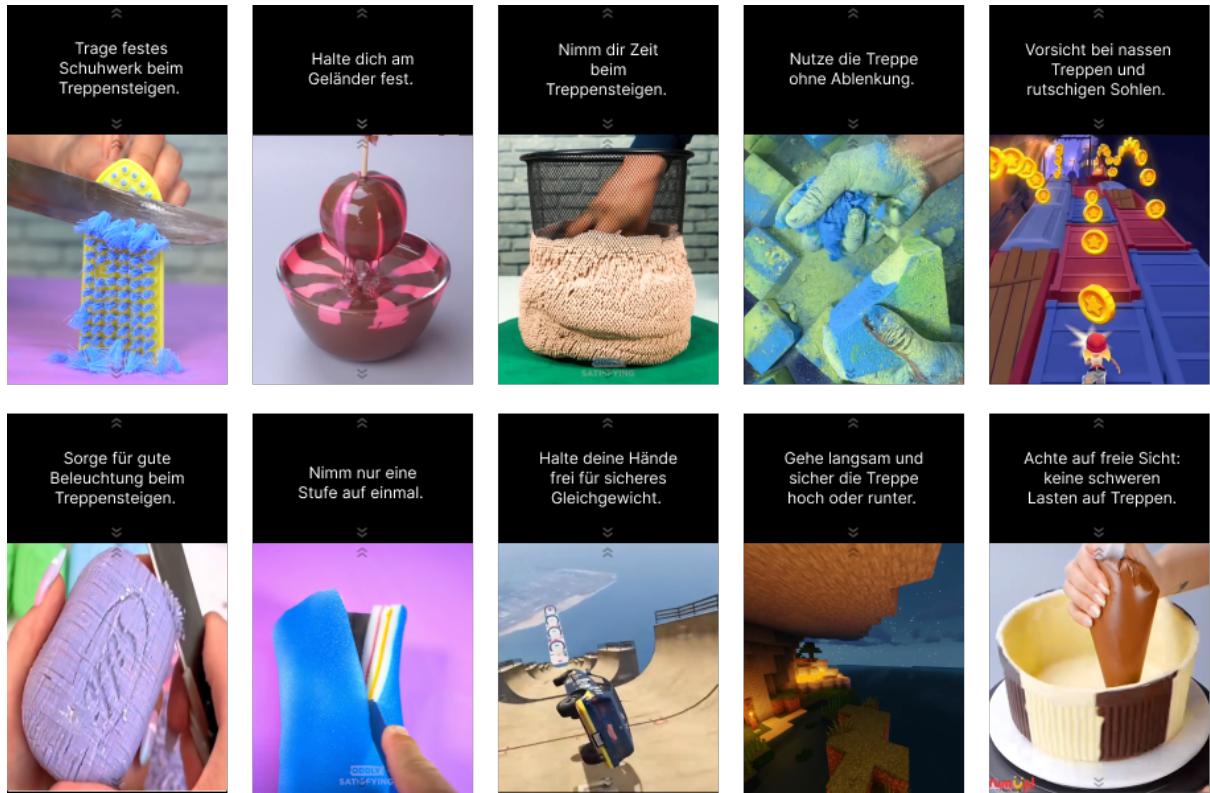


Figure 5: Lo-fi Prototype of TikTok-Brain Platform Interactions



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 Discussion

This chapter discusses these findings in the context of design decisions, user feedback, usability testing, and future considerations. Through a structured pro-con analysis, it was evident that an app using short-form video could achieve high engagement, especially among users already accustomed to similar social media platforms. However, feedback also highlighted a challenge: while the video format was engaging, users might still lose interest over time if the content did not vary or if the purpose of the app wasn't clear. This feedback led us to focus on creating a highly dynamic and visually engaging app experience.

User feedback was central to the evolution of the TikTok-Brain app. In the early stages, a pool of 30 participants provided input through surveys, which helped us understand user preferences and expectations. Insights from these surveys guided initial design decisions, including the importance of a distraction-free interface and the appeal of humorous, engaging content.

The pro-con analysis further emphasized the importance of simplicity in the app design. Through iterative design cycles, the app was refined to eliminate traditional social media features (likes, comments, shares). This iterative process helped ensure that TikTok-Brain met user expectations, balanced engagement with educational content, and avoided the pitfalls of over-complicating the interface.

One of the critical design choices in TikTok-Brain was its simplified user interface. Navigation within the app relied solely on intuitive swipe gestures, which allowed users to seamlessly move between videos without unnecessary interaction. This minimalism ensured that safety messages remained the focus point.

While TikTok-Brain successfully demonstrated the potential of short-form video for safety messaging, some limitations were noted. One limitation is the app's reliance on randomized video content, which, while engaging, may not always align with the specific needs or preferences of each user. Future iterations could incorporate AI-driven personalization to adapt the content based on user interaction patterns, enhancing the relevance and impact of safety messages.

## 5 Conclusion

The TikTok-Brain project successfully demonstrates an innovative approach to delivering safety messages by harnessing the engaging power of short-form video. Through iterative design and user feedback, we refined the app to ensure it was both intuitive and effective. The minimalist, swipe-based interface encourages users to focus on the content, enhancing message retention without the lure of likes, comments, or other interactive elements.

While the randomized video approach proved engaging, future iterations could benefit from personalized content driven by AI, tailoring safety messages more closely to user behaviors and preferences. Overall, TikTok-Brain represents a promising step forward in digital safety interventions, merging entertainment with crucial safety information to cultivate awareness and prevent distracted stair usage. This prototype serves as a foundation for further developments in creating engaging yet purposeful social media applications.