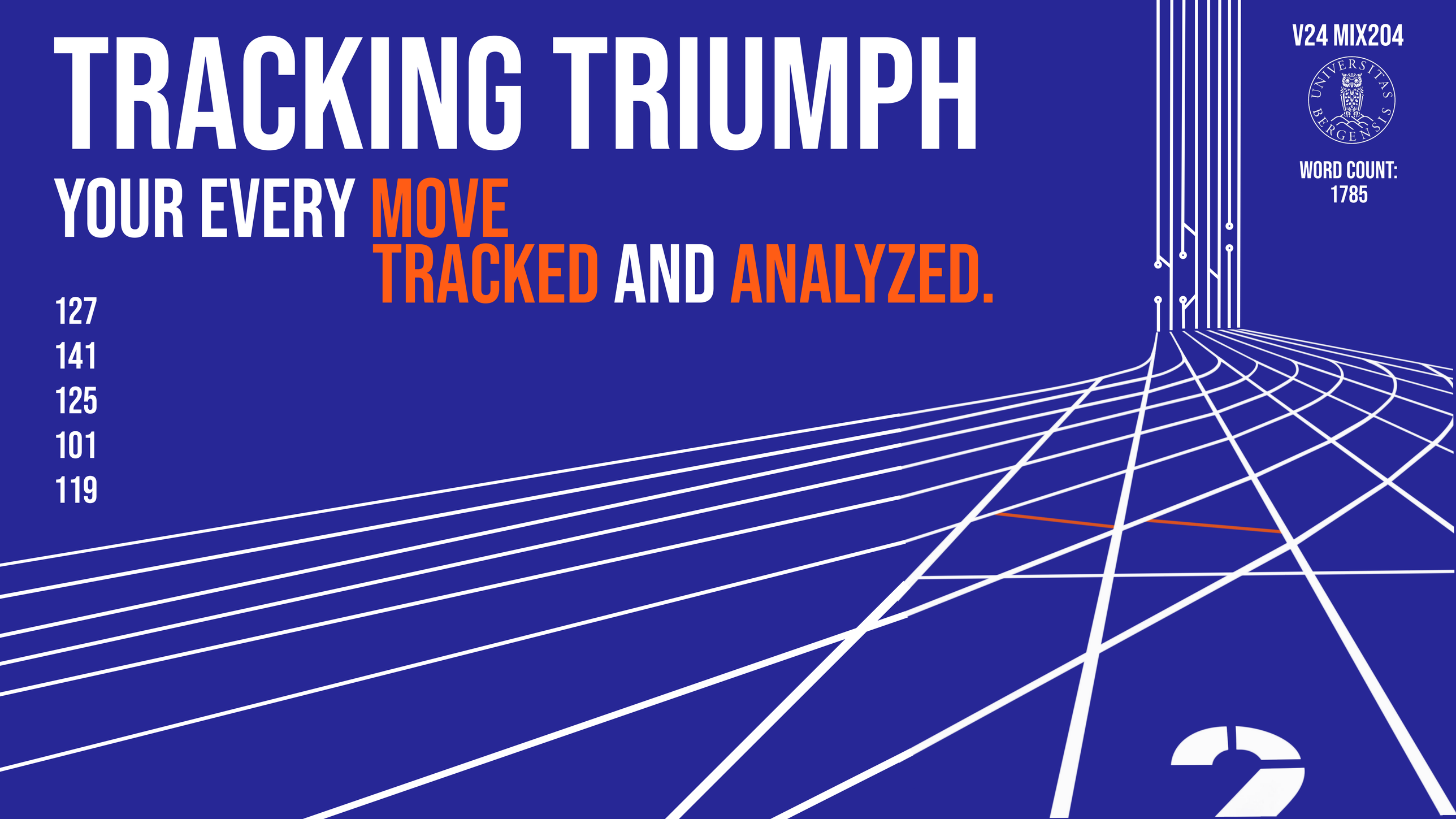
# TRACKING TRIUMPH

## YOUR EVERY MOVE TRACKED AND ANALYZED.

127
141
125
101
119

V24 MIX204

WORD COUNT:
1785



# DO YOU FEEL LIKE YOUR FITNESS APP KNOWS YOU?

# ...BECAUSE WE DO NOT.

# INTRODUCTION

A fitness app's primary use is to be a digital assistant. It should keep track of workout-related data that could be cumbersome for the user to do manually, and provide insights about the workout that the user may not have intuited otherwise. The latter is also possible through a personal trainer or a physician.

However, there is a large difference between the professional health assistant and the traditional fitness app. The professional is able to see how you move, analyse it through their extensive knowledge in the field, and turn that into targeted feedback for you.

The effectiveness of an app depends entirely on the quality of data it receives, which is frequently limited in a commercial environment. This is where the technology of lifelogging, whose purpose is continuous data gathering, could give the fitness apps a fighting chance against the professionals.

# INTRODUCTION

## IN MODULE 1

In this semester, our group looked at the use of lifelogging as a tool for sports logging. Our sentiment at the end of the report was that it is viable, though current lifelog retrieval systems were not designed for that kind of use. We also speculated that as athletes are typically early adopters, the adoption of lifelogging would not be unfamiliar to them. This is why we are also targeting those early adopter athletes for this project.

## FOR MODULE 2

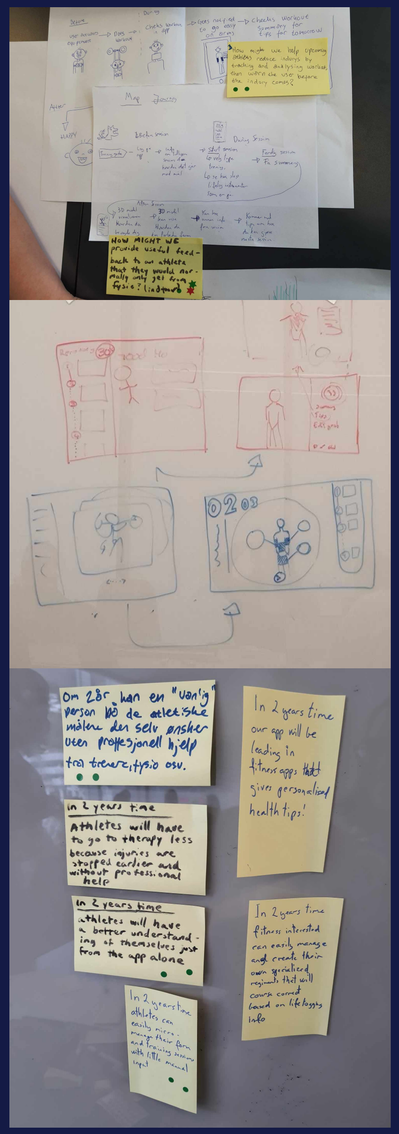
We speculate on a future where sensors on one's body are able to continuously track their precise movements. The application we propose is able to take this data, as well as from other lifelogging sensors, and turn it into heavily specified feedback. Our aim is to create a fitness app that knows the user better than any competitor, and hopefully reduce the amount of physician and personal trainer visits an athlete would need.

# THE PROTOTYPE

# THE PROCESS

When we first started with the design process, we got in touch with a Ph.D. student that works within health and rehabilitation technology and conducted a semi-structured interview. This provided us with an understanding of how fitness applications are currently utilized by athletes and in the health sector, as well as the latest research in these areas.

The group started the design process with brainstorming sprints. These sprints served as an invaluable exploration phase, where we analyzed existing workout apps and their features. With Jakob Nielsen's usability heuristics in mind, we focused on identifying features that resonated with users and those that presented opportunities of enhancement. By looking at weaknesses and strengths of current applications, we gained crucial insight into user preferences (Harley, 2018).



# THE PROCESS

After the brainstorming, we started wireframing. Focusing on Nielsen's heuristic of user control and freedom, we prioritized the placement of features and buttons in our prototype. Through thoughtful consideration of user interaction patterns, we aimed to facilitate users with a sense of control over the application (Rosala, 2020).

Moreover, we adopted Nielsen’s heuristic of simplicity and clarity as a guiding principle throughout the wireframing process. Emphasizing the importance of minimalist design and whitespace, to improve user experience by eliminating unnecessary elements and use whitespace. Furthermore, focusing on the “less is more” philosophy, we aimed to reduce cognitive load and facilitate effortless user experience.


# THE PROTOTYPE

## 3D-Model and Dynamic Layout

The prototype prominently features a 3D representation of the user, displayed on the main page. It replays their movements in real time and alerts them if any issues occur during a workout.

The app also knows whether they are resting or active. This changes the main page accordingly, showing accurate information based on their current status.

The lifelog camera tracks and monitors water and food intake, while sensors measure sleep cycles and movement. Together, these data points determine the user's readiness to train.


# THE PROTOTYPE

## Warnings and Recommendations

Tracking Triumph monitors the users workouts and provides visual feedback using the 3D model, offering tips and analytics tailored to your performance.

Additionally, the system’s sensors accurately track movements, alerting users to any actions that could lead to injuries.

# THE PROTOTYPE

## Workout Recap

"Workout Recap" offers users detailed reviews and comparisons of their workouts, helping them track progress towards their fitness goals. It includes weekly, monthly, and yearly analytics, along with specific warnings and visual guides like videos and images, to enhance training efficiency and safety.


# THE PROTOTYPE

## Tonight's sleep

Easy access to monitor sleep efficiency, with metrics such as overall sleep percentage, quality of sleep, and sleep duration.


## Quality of sleep

Providing in-depth analysis of sleep stages, helping users understand the distribution of sleep stages.

# THE PROTOTYPE

## Settings

On the settings page users can manage their profile and their connected devices.

Users can view and edit their personal information, including username, country, and subscription type.

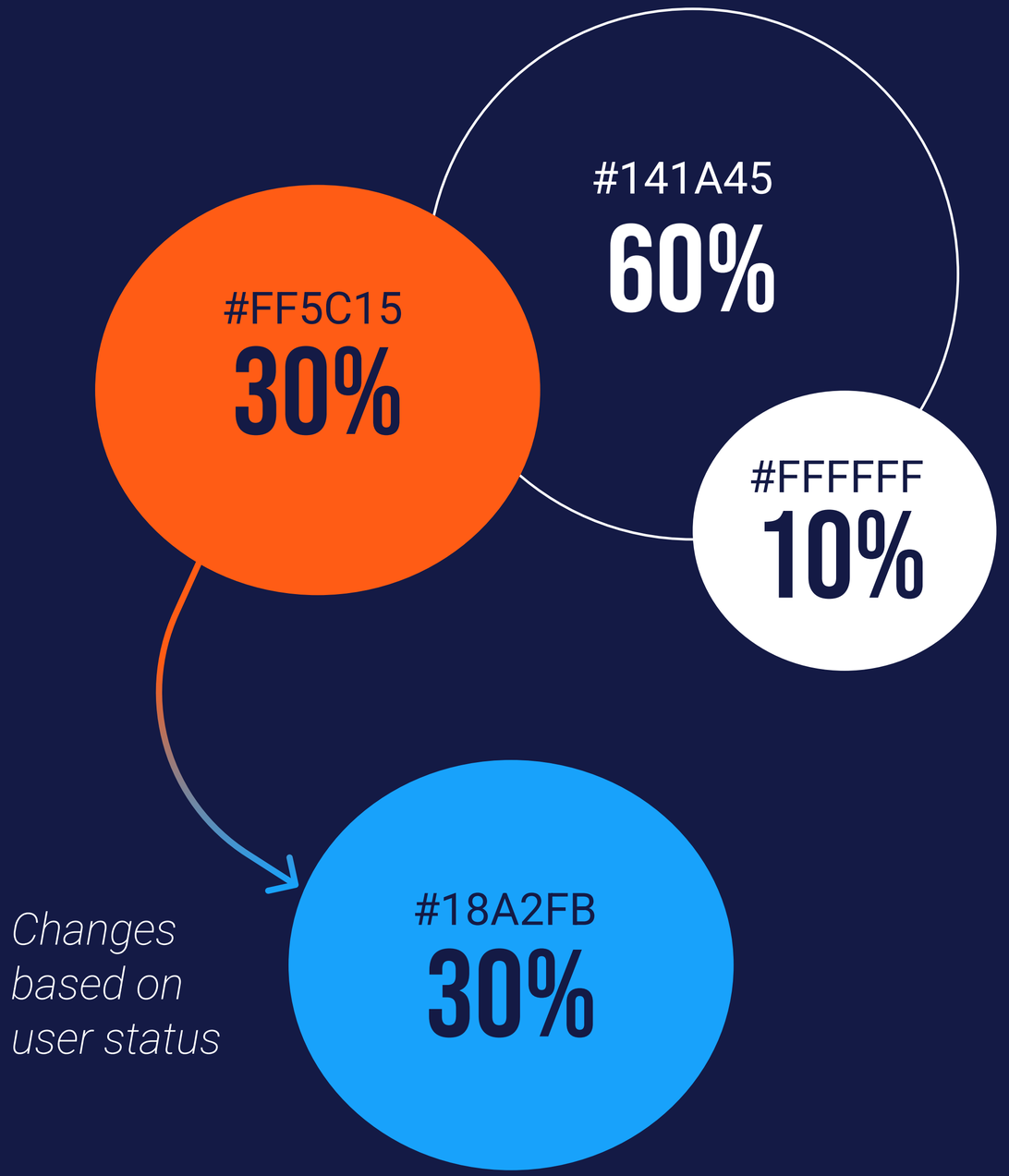
The settings also lists all connected devices, such as watches, pulse belts, shoe sensors, fitness rings, and life-logging-cameras, with easy-to-see indicators showing their connection status.

This ensures that users have full control over their devices and can make adjustments as needed to optimize their tracking experience.

# THE PROTOTYPE CAN BE VIEWED HERE

# COLOURS

We made a color hierarchy in our system, adhering to the 60-30-10 rule with dark blue, orange, and white. We consistently applied these colors across the system to maintain uniformity and standards. By maintaining the colours at approximately 60%, 30%, and 10%, the design attains visual balance, emphasising key elements, and keeps the design simple and consistent (Olohijere, 2023). Further, the orange was specifically chosen to evoke a familiarity to other existing fitness apps.



# GOAL PROGRESSION COLOURS

Enhancing visibility of system status, we used red, yellow, and green actively in the design to signify goal progression and active/inactive sensors in the settings.

Colors were also used to signify if the application was in resting or running mode, switching between the usual orange with a calmer, lighter blue (Harley, 2018).

#9BF62D #FFEE32 #E33C5E

# TYPOGRAPHY

In our system, we chose Bebas Neue for titles and Roboto for body text. Bebas Neue, is a bold, all-caps font and effective for headings. Although it was used sparingly due to its intensity. Further, Roboto's lighter, sans-serif style prevented visual clutter, making it ideal for detailed text. This font strategy enforces a strong visual hierarchy, a key principle in UX for enhancing visibility (Gordon, 2021).

**TITLE - 50 PX - BEBAS NEUE**

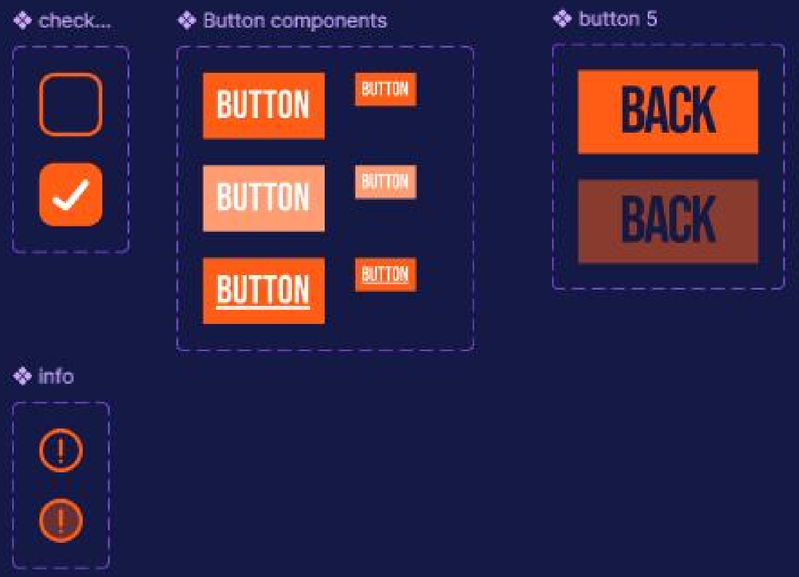
**SECTION TITLE - 30 PX BEBAS NEUE**

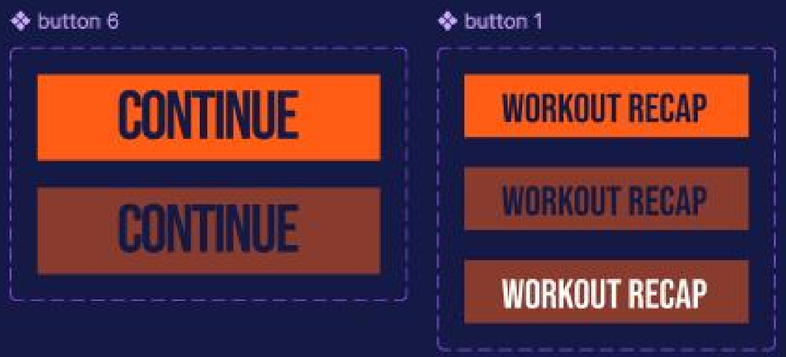
Main Text - 20 px space grotesk

# BUTTONS AND COMPONENTS



We designed key elements like text and buttons to be prominent, with larger sizes for crucial actions such as the 'Workout Recap' button, which is noticeably bigger than the 'See More' button. This approach not only creates a visual hierarchy for easier navigation but also maintains design consistency across the application, ensuring that users can easily identify and interact with key functionalities.



# EVALUATION

# USER TESTING



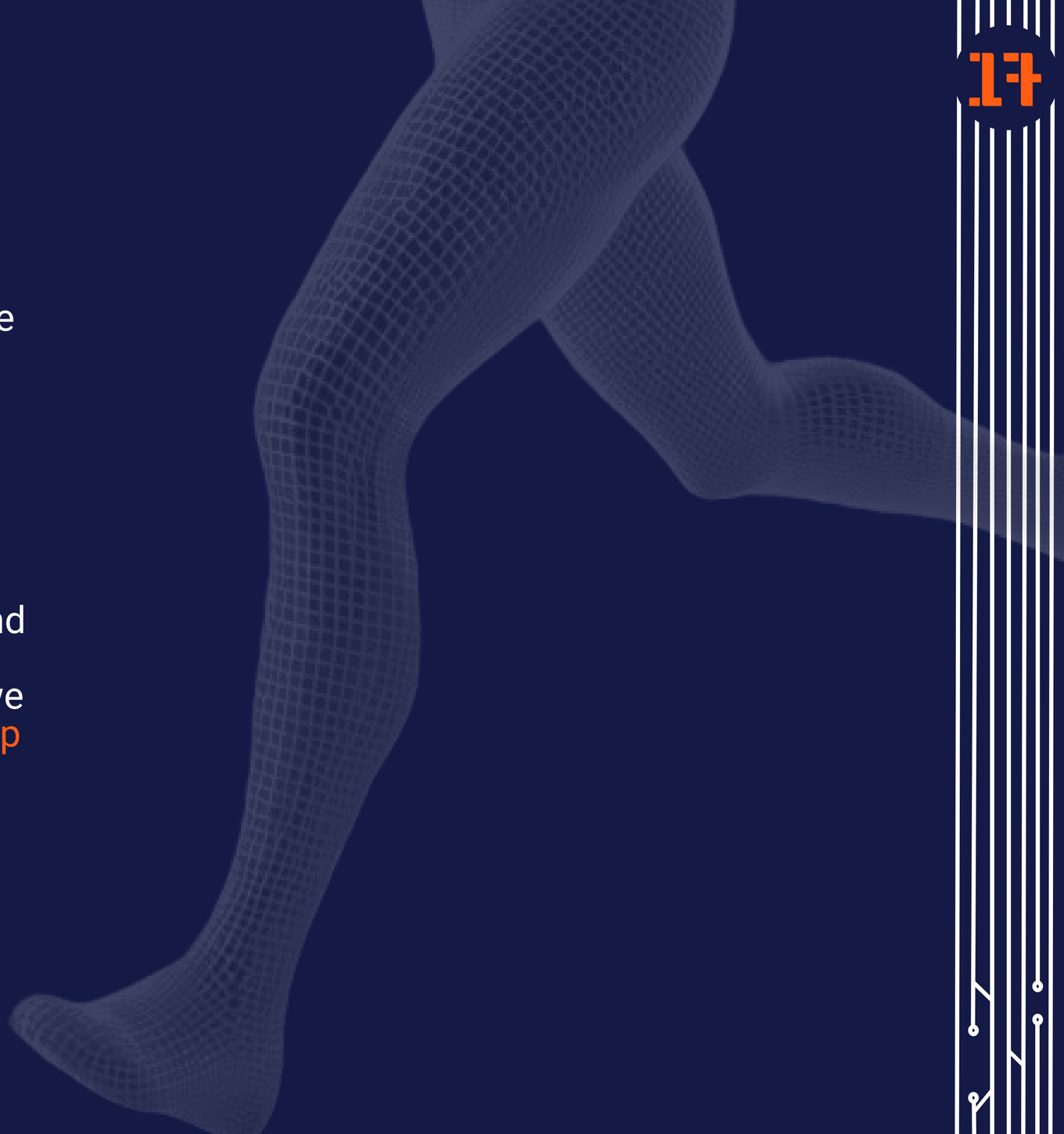
In our user testing, we specifically recruited participants from our target group: early adopter athletes. The recruitment ensured that the feedback we collected was relevant and insightful, contributing to precise improvements in the prototype functionality. Additionally, to maintain consistency and depth in our evaluation process, we involved the same PhD student we had previously interviewed throughout the user-testing. The PhD student's expertise in health technology was crucial for guiding the tests and interpreting results.

The PhD students' ongoing participation ensured that the prototypes features were both technically accurate and user-focused, aligning with modern training and rehabilitation needs. Working with knowledgeable testers and experts helped us identify challenges and opportunities, allowing us to tailor the app to advanced user needs and enhance its accuracy and usability in real-world training scenarios.

# USER TESTING

Further, feedback from our user testing highlighted a common issue: users were sometimes unsure about the details and purposes of various statistical models presented in the app. In response to this confusion, we took steps to enhance user understanding and transparency. We implemented information buttons above each statistical element throughout the application.

These buttons, when clicked, provided users with detailed explanations about the data and metrics displayed, ensuring they had the necessary context and clarity to fully engage with the features of the app. Additionally, by including these information buttons, we complied to Jakob Nielsen's heuristic on providing help and documentation, ensuring that help was readily available and relevant to the tasks users would perform.



# DISCUSSION AND CONCLUSION

# FUTURE ITERATIONS



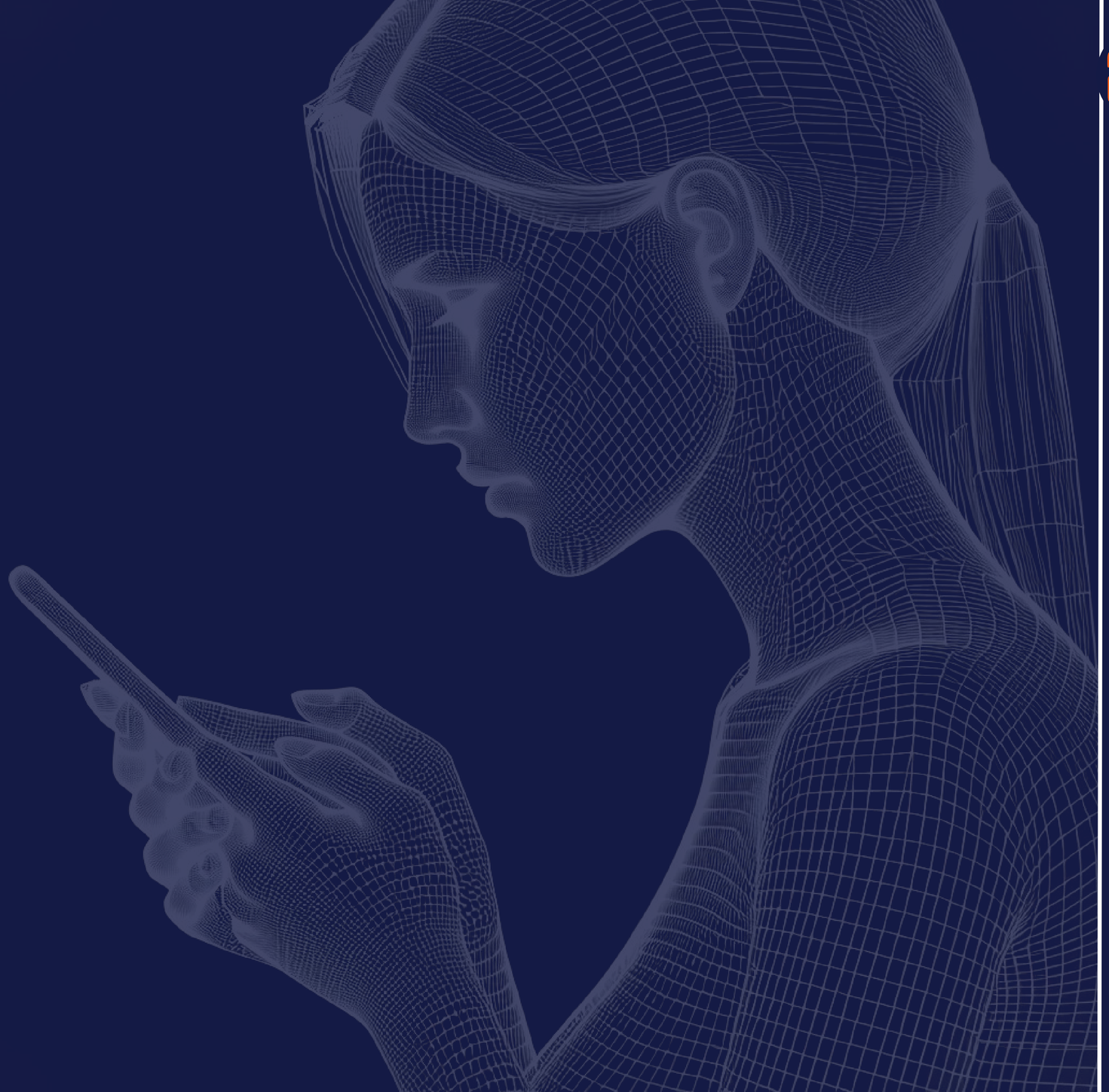
Although we are satisfied with the prototype presented in this paper, we still have many ideas for how it could evolve over the next iterations.

# FUTURE ITERATIONS



## Mobile and smartwatch version

The first priority of further development would be to establish a mobile version of the application. For a fitness application, being able to bring it with you on a run would be essential, and a mobile version would do just that. Many fitness apps also have a version created for smartwatches only, eliminating the need to bring anything with you other than a watch. This could be interesting to develop, and though much of the design would be lost, it could still give real time warnings and stats as long as the watch is connected to a sensor.



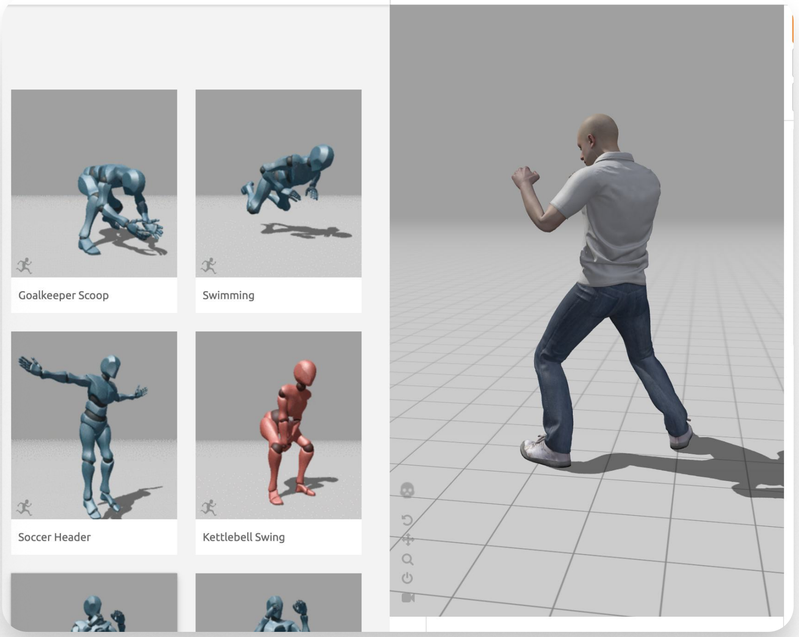
# FUTURE ITERATIONS

## 3D scanning

A feature that was scrapped during prototyping due to priorities was the ability to scan the user and replace the generic 3D model with themselves. During prototyping this was done through Polycam's LiDAR scanning and animated in Mixamo. We speculate that this would enhance the users' connection with the application, and create an experience unique to Tracking Triumph.


Image: Screenshot - Polycam

Image: Screenshot - Mixamo




Above: Animation rigging in Mixamo

Left: A 3D body scan from Polycam

# REFLECTIONS ON THE COURSE

Our research from module 1 suggested a strong potential for lifelogging in the sports and fitness field, though there were significant obstacles to overcome. The two main hurdles were the issue of strict Norwegian privacy laws limiting the scope significantly, and the lack of an existing lifelog system tailored for fitness. The latter is what we aimed at fixing in this module, but the former remains a problem still. In our interview with the health technology PhD student, we were told that as soon as the data has to be processed by a third party, General Data Protection Regulation (GDPR) compliance is essentially broken. This made ideating and developing quite limited, so we chose to look past GDPR instead and imagine a future where that is no longer an issue.

By working on this concept for the entirety of the course, we have gone from knowing almost nothing about lifelogging to applying its principles to a new field. One could look at it as a larger double diamond of design, where we started by exploring lifelogging and gathering insight about the field. We then narrowed our insights down to a theory. After this, we started exploring possibilities for a prototype in the field, which we then narrowed down to Tracking Triumph. In the end, we believe our prototype effectively fills the gap in fitness-focused lifelogging applications.

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