

Report:

“Sustainability Score Tracker”

As already described in the TB I report, I wanted my app to focus on the topic of sustainability, as I think that it is one of the most pressing subjects of our time.

Because I already elaborated on the importance of fighting climate change in my TB I report, I will only discuss this topic briefly here. According to the IPCC report from 2022, four risks are especially probable for developments in Europe: heatwaves with heat-related mortality and severe damage to ecosystems, persistent droughts that threaten agriculture and thus food supplies, water scarcity and flooding caused by heavy rain and sea level rise mostly affecting coastal regions (IPCC 2022). Developing countries, however, face an even higher vulnerability to climatic hazards, although they bear less responsibility for human-caused damage to ecosystems and the climate. Since many governments and industries fail to fight climate change, it is even more important that individual actions take place: They can shape market demand and serve as a positive example for others. Even the smallest individual actions can add up to large cumulative effects! However, the topic is still complex and can be intimidating. With a game-like app using a scoring system, that I started to develop in TB I, I wanted to help people interact with the subject in a motivating way to make it more approachable.

For TB II, I decided to work further on my prototype with the goal of developing a GUI with multiple pages and the implementation of a .csv file. Furthermore, I wanted to include more information for the users as to why the topic of sustainability is important and to explain to them how to play. Lastly, I aimed to redo the overall design of the app.

I started from the GUI of main game and then added the further pages. First, the start page and afterwards the new and returning user pages, linking them both ways (from the start page to the main app). Moreover, I incorporated a helpers.py file, as we learned in class, to keep the code in the main file cleaner. The last page I designed and programmed for my app was the info page: Whenever a new user registers, the ‘submit info’ button directly guides them to this info page, before entering the main page of the app. Via an info button ‘?’ on the bottom left, all users (new and returning) can always open the info page again, if they are unsure about something. This way, the app speaks for itself, and users don’t have to rely on reading my report to understand how to play.

For the design of my GUI, I aimed to keep it simple but a little playful. For the background image, I decided to go for a slightly transparent photo of wildflowers, which should represent the nature/sustainability character of the app. I wrote the headline myself in 'handlettering' style to loosen up the otherwise rather strict design and make it a little bit more playful. For the colors, I went mostly for muted green tones, as it is the color mostly associated with nature and sustainability. Exceptions are only the badge welcoming the new user and the circle on top of which the user score is displayed. Both are colored orange to stand out a little bit.

On the first page, I put two green rectangles underneath the buttons for the new and the returning user, to make them stand out in front of the flower background. To highlight the buttons (homepage, close, info) as well as the entry boxes and login/submit info buttons, I incorporated half-transparent rectangles. Additionally, I painted three rectangles for the main game. The two green ones form the background for the different clickable options. The darker green field holds the sustainable actions that gain the user +5 points, while the one in the lighter green tone has the options that give +10 points. Both rectangles have a field that reveals the number of points associated with each task in the top right corner. The field stands out a little bit, so it is noticeable right away. The third rectangle is colored in a light beige and contains the button asking for more tips on sustainability and the afterwards displayed tips.



Fig. 1: start page



Fig. 2: new user page

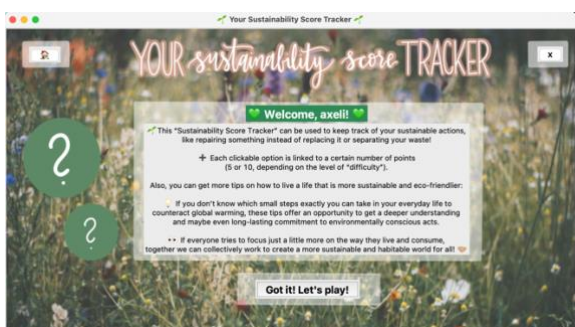


Fig. 3: info page

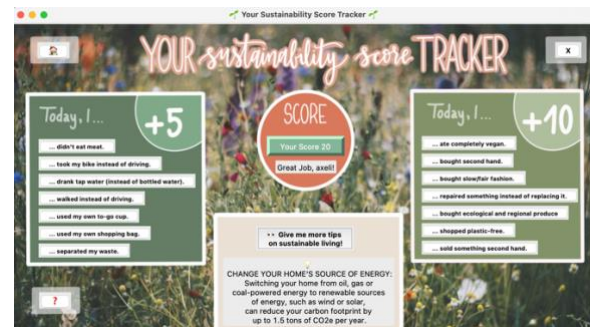


Fig. 4: main game

As I integrated two user flows (one for a new user and one for a returning user), I originally aimed to track the user data. One goal was to keep track of the high score and continually update it when it gets outnumbered. I tried to incorporate it in the .csv file by setting the high score to 0 once a new user registered. Unfortunately, I couldn't manage to access only the last value in the associated row in the file (the row of the currently user that is logged in). I tried this using the .loc[] and index_col methods. Since I couldn't get it working, I also didn't manage to update the highscore. I therefore deleted the code in the .csv file and the app.py.

References

IPCC (2022). Summary for Policymakers. In: *Climate Change 2022: Impacts, Adaptation, and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, et al. (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3-33, doi:10.1017/9781009325844.001.