Sport Hackdays 2022 – Swissski Challenge 5

Challenge

VISUAL COMMUNICATION OF TURN METRICS IN ALPINE SKIING
In skiing there are no personal or all-time records like in other sports. The conditions can change significantly within short time. Thus, performance measurement is mostly done with benchmarking and athlete comparisons. Unlike in other sports, comparisons are still done with simple intercept time measurement although trajectory data exist. This means that it is not always easy to point out exactly where an athlete gained or lost time on the track. For that, good visualizations are crucial which leads to the challenge. Swissski wants to visualize athlete trajectory data for coaches and athletes to provide them maximal insight in the blink of an eye. The visualization(s) must be **simple**, **easy to understand** and provide **maximal output with minimal input**.

Possible Solution

The main purpose of the visualization should be to point out where exactly an athlete gained or lost time on the track. A possible solution for that could be dynamic visualizations including replay function and colouring.

Data and Technology

Swissski provides athlete track and terrain data measured by different sensors. These data can be linked to maps (e.g. Mapbox) to visualize the track data on the terrain. The data come from four different sports: Alpine Skiing, Ski Cross, Alpine Snowboard and Snowboard Cross. As ideal delivery Swissski regards a stand-alone application where they can import athlete track plus terrain data and get as output useful visualizations. The application should ideally be embeddable into the MySwissski App.

Challenge Owner

Swissski is the official Swiss Skiing Association and the umbrella organization of Swiss Snowsports. Since it's foundation 1904 Swissski is one of the most successful sports associations in Switzerland.