**Which feature did you find the most difficult to use and why?**

**Next track (8)**

next track wasnt too clear to me, the colored icons are closer to upload rather than next track

It was not clear how to use next track no instructions given

When I had just uploaded one file, clicking next track was still possible but obviously didn't do anything. I was a little confused until I uploaded multiple tracks and learned I could use the button to toggle between tracks which was nice. I also didn't realise that the maps tracks are not clickable per say, you can drag the map around but the track itself doesn't offer additional functions. The cursor has the grabby hand, which makes it feel like you should be able to do more.

Site navigation, scrolling moves the map, instead of the site

The "Next Track" feature was a bit confusing at first. I didn't realise that it was related to the files I upload, or the boxes above that indicate the track.

Moving between tracks

the coloured bar ranges from blue to green, difficult to distinguish

Not being able to select a specific uploaded file, have to scroll through others to get to a file.

**No problems (6)**

All the features are clear and easy enough to use.

There was nothing difficult.

NA

none - was all very straightforward and easy to understand and use

Nothing

There was no difficulty in using this app - it was very smooth.

**Graph (7)**

Graph above the map, it is pretty small

The options on the side bar are very large and cover the page making the graphs tiny

Understanding the color bar of the speed

reading elevation and speed

The Speed-Elevation graph. It is too small to see specific data.

Looking at points on the chart

The speed-elevation graph because it is very crowded and hard to read

**Misc (2)**

NaN when there is a missing datapoint

I can press the bold font but then I can change it back to normal

**How do you think the usability of that feature could be improved?**

**Track(7)**

The "next track" button should offer better guidance, either to be greyed out when only one track is uploaded, or for example to pop up with "upload additional tracks to use this feature" if it is clicked before multiple tracks are uploaded.

A previous track button would be helpful in addition to the next track button

The colored boxes that show the color of the uploaded file below the Upload button can have links that set the view of the map to that specific file.

More guidance needed on how to use next track, accessibility button should be bigger as it is not noticeable at all (maybe make it white?)

Switching through the uploaded tracks could be improved, e.g. go to previous track, or jump to a different track, also show the names of uploaded tracks.

Clicking on the track should notify you with the stats for that point

bigger icons for next tracks, center it between upload and next track perhaps, better choice of color for tracks as well

**Bigger chart(6)**

you could make the top graph for speed-elevation a lot larger.

provide ability to zoom in on graph

slightly less cramped data would make it more readable

bigger chart, so its less cluttered

Make it larger

Make map smaller

**N/A (5)**

It can't be improved.

n/a

NA

N/a

N.A

**Misc(5)**

A collapsible options bar

One word: Loot boxes

Upload multiple files at once.

Show a start point of the run. Make it non-scrollable

To be able to return to the normal font (without the font being bold)

**The design of which feature did you find the most appealing visually and why?**

Map (7)

Map

The map view with exercise route is very clear, the animation of showing the route om map is ell designed.

Map is very readable

I like how you "fly" from one track to the other

The map as it was dynamically switching between tracks

uploading several files and viewing them all at once.

The possibility of uploading 5 files and changing them is a very good feature and it has a good design

Graphs (3)

Graphs. Very clean and readable.

The speed and elevation plotting

The graph of the elevation and speed, gives very informative details about the file

Pie chart(13)

Pie chart - great animation and tooltip appears after hovering over a section

summary statistics

Overall statistics , easy to understand due to colour coordination

I love the pie chart

The summary stats look nice, but I did have to click through a few tracks to notice there were differences in the colours that were meaningful.

I liked the pie chart, unique way of using the data.

The "distance travelled" pie chart

The animation of the summary statistics, it was very easy on the eye.

the stats are really well displayed

Piechart

Pie chart of distance travelled. It is a useful breakdown and has good colour coding.

The map and the pie chart

Distance travelled (pie chart) is clear and big

The analysis of your evaluation should be presented clearly in its own section. Use subheadings if needed to organize your results.

**The design of which feature did you find the visually least appealing and why?**

**Speed-elevation (9)**

I think the speed plot is too thick. Make the line thinner.

The graphs

The speed-elevation graph because it is very crowded and hard to read

Speed & elevation graph is too small, not possible to see the sped very well (only 2 y labels present)

The speed-elevation plotting is generally nice but the plot is a little bit small.

speed elevation plotting, hard to read

The Speed-Elevation graph, it is too cramped together

The way that multiple files are represented

The elevation and speed was relatively standard, which in one sense is a little boring but on the flipside is familiar and easy to understand. Not every feature needs to a be radical design so even if it's not very exciting the elevation and speed do work well as visualisations.

**Map + uploaded track icons (3)**

the uploaded track icons can be improved

The squares indicating the uploaded files could use more detail.

The map just seems out of place, doesn't fit in with the design of the rest of the app.

**None (3)**

None

n/a

There were no such features.

**Misc (1)**

There's a quote in Hungarian (?) which overlaps with the title of the track being viewed

**Colour bar and changing colour of speed (7)**

the blue to green bar is quite big and looks like it carries important information but it is only explaining the colour of the above number

Changing colour of speed

the bar with average speed and distance raging from blue to green

Random colour gradient

The bar showing the colour of the speed, it is not obvious what does it represent

the average speed window - just because of the colours chosen and I felt that they didn't fit in particularly well with the rest of the page, but that is just an aesthetic thing - I could understand what it was conveying.

Colouring the numbers: You display the same dimension as a number and a colour. It's pointless. Pick one or the other. Alternatively if you want to be fancy you can display on that linear scale the position of the speed (on the top) and position of the distance covered (on the bottom) Also the speed-elevation plot gets cluttered when there is too much datapoints: If I were you I'd check at what point it gets cluttered and do a Kalman Smoother on the data. Alternatively you could take the moving average of the data if you don't want to go into state-space modelling.

**How do you think the design of that feature could be improved?**

**Map + uploaded track icons (3)**

E.g. if you hover over one of the squares, it could show the name of the track. Also the name of the track could be bigger, and in the centre of the page.

I think it can be clearer with a label or something, at first I thought they were buttons that could be clicked.

Have a blue border? Put it in a container etc.

**Chart (9)**

Perhaps a bit more height dedicated to the plots above the map.

Let graph take more space, have more y labels

provide ability to zoom in on graph

Make it thinner.

I like the speed-elevation plot but it looks a bit squeezed especially when the distance is longer

Bigger chart

Make it larger will show the data stats clearer

slightly less cramped data would make it more readable

Make it larger

**Colour bar and changing colour of speed (7)**

Remove it

could be clearer and grouped together

A slightly more cohesive colour scheme

wider colour range

Perhaps some additional interactivity to link it to the map below, for exampel hovering on parts of the track in the map and highlighting the relevant part of the speed/elevation visualisation.

It could be displayed on a chart with comparison to other trainings

stated above

**N/a (3)**

n/a

Impossible.

See above.

**Misc (1)**

remove the quote or adjust the ui so that there is no overlap

**Which data visualisation feature did you find the most informative and why?**

**Average speed with colour bar (2)**

Average speed.

The average and total distance were informative that is the most important information and the colour coding helped to convey it

**Plotting the track on the map and flying (4)**

viewing the files on the map ( nice scaling, nice colour choices)

The track on the map itself - it zooms in very well when uploading a new track, telling the user exactly where the hike/walk took place

Map

the map

**Speed and elevation (5)**

The speed, elevation graphs because they show detailed info for each time point

speed and distance

Speed-Elevation Plotting

Speed-elevation, it is nice to have them on the same graph to see how the elevation directly impacts speed

The speed-elevation plotting shows a lot of useful details but at the same time is simple and easy to use.

**Pie chart (12)**

The bar graph as it was clear and concise

Summary stats. Because I like stats

The distance travelled - the breakdown of the 'gradient' was very helpful.

The summary statistics, which has clear pie chart and colour bar showing information.

Piechart

I like the distance travelled as it splits up how much was uphill,downhill and horizontally.

the distance travelled chart, because knowing how much of your run/walk/cycle was uphill is useful information and also the visualisation was easy to read and pleasingly animated

summary statistics, easy to read, well formatted and colourful to catch eye

Overall statistics as it was very easy to read data

Distance travelled

Summary stats have a lot of good information, and the design is nice and skimmable if you are looking for overall stats.

Pie chart, clear info

**Which data visualisation feature did you find the least informative and why?**

**Charts (8)**

elevation and speed graph above map

the line graph as there is too much going on in a small space

Speed graph, as mentioned before y axis has two labels

the speed-plot elevation was fine, but it was hard to relate how the graph related to the map.

The Speed-Elevation graph as it was very hard to read data

Elevation.

top graph

speed-elevation plot. It gets cluttered when you have too many datapoints: run a smoother

**Map(3)**

The plot on the map itself, doesn't show much info other than just the plot itself

The map

The plotting track on the map is not "connected" with any of the other features.

**Average speed with gradient bar (5)**

Colour gradient

the blue to green scale under the total distance, i am not sure it is very helpful

Colour bar

average speed and distance (again, colours)

The gradient bar (green to blue) which shows the colour of the average speed. This doesn't seem very useful to me.

**Summary Statistics (1)**

the statistics summary, i thought the elevation would show the changes in elevation where it showed the distance instead

**N/A (4)**

I can't think of any improvements for this aspect of the app.

N.A

n/a

All the features are pretty packed with information, they are all quite informative.

**Total time spent (1)**

Total time spent.

**Misc (1)**

The summary statistics as a bar char was perhaps not the best choice for displaying this data

**How do you think that feature could be made more informative?**

**Map (8)**

It would be nice if you can click or hover somewhere on the map and see the corresponding speed, elevation etc. Or if you click on a pie chart section it could highlight the corresponding sections on the map.

The line can have markers that show info at that point or the line itself can have properties such as color that change according to values of elevation, speed etc?

the mapcould display the popup markers

More labels

I think if some start and end markers were added, it would be more meaningful

Make it from start time to end time in hr/mm/ss

the ability to hover over a point on the map and see where it relates to the speed/elevation plot would make it easier to understand how the two are linked

**Graph (6)**

split the graph perhaps, the two lines are completely different dimensions and it can be a bit misleading, having different units on different sides of the graph is a bit confusing as well

reduce the size of the map a little and group the graphs together

Make it larger so the data could be read off easily

See above

clearer info

**Average speed with colour gradient (5)**

Maybe it doesn't need to be that big because it is only an explanation about the colour

Incorrect use of colour gradient

Scrap it.

Show a different piece of information with the colour.

Don't use it, since its just a number

**N/A (3)**

n/a

---

N.A

**Misc (1)**

the files have their own names given ( eg. Milngavie Ward Running),

**What new feature would you add to the website and why?**

**Managig uploading tracks/switching between them differently (5)**

When clicking on the squares indication different submission, it will be nice if it can redirect user back to preview analysis.

Remember previous tracks

The ability to upload multiple files at once, and select them rather than rotating round the queue.

Feature to remove an uploaded track

be able to click on one of the little square directly to show a map instead of the "next track" button

**Connection between map and charts (2)**

A hot line on the map to show the changes of heart rate/elevation/cadence along different paths of the route

Hovering functions to add more info if details are wanted for all visualisations. There is a great high level info, but some people like to dig in at the details, for example looking at the stats for a particular hill or stretch of difficult running.

**More charts (5)**

More info in the graph

Perhaps the average elevation would be good to know? The ability to compare two different tracks?

Calculate calories burnt (and show total calories burnt and calories burnt per run)

a visualisation of heart-rate would be nice

You can add more statistics like heart rate and cadence; more graphs

**Indicate start and end point (2)**

markers maybe for start point and end point as the track seems a bit directionless (maybe its just my gpx file not working properly)

It would be helpful to indicate the start and end of each track on the map. Also, if you click somewhere on the speed/elevation graph, it would be nice to see where that point was on the map.

**Compare tracks (2)**

Compare the same route, but different runs

categorizing the trainings by sport discipline

**Design changes, accessibility (4)**

footer for contact :D

Night mode

Add a switch to go to different views, all data presentations on one page is a bit too much

different colour schemes as night mode is very popular and a high contrast colour scheme would improve accessibility

**N/A (3)**

Is fine as it is

No new features.

nothing

**Is there anything else that you would like to mention about the web page that could/should be improved?**

**Compliments ( 7 )**

brilliant work guys!

Everything is great, except for the speed-elevation graph

Good job

It is very sexy.

good.

A more obvious notation on where data is plotted on the map when zoomed out

Nope, well done

**Accessibility ( 4)**

Font size is all over the shop, can make the overall layout look at a little scattered.

For accessibility, the only thing taken into account is the size/style of the fonts. Font style is irrelevant. You could consider something like increased contrast or colourblind mode. Also, having alt text in html elements to make it work with screen reader.

Accessibility is not visible, next track button not really clear how to use

**Misc**

The name of the track below the select track option.

**DIscussion**

Provide a discussion of the results, including comments about future work and ways you might improve the design of your system.