Final Project

Sakari Liesjärvi

I made a website showing statistical weather information that is fetched from TAMK Cloud API. The website has 3 views that show different information.

Project Video
https://youtu.be/t9x394UjUD0

Basic Functionality

The first view has a table that shows 50 latest weather readings from the API. It also has a navigation bar to change between each view. In addition, there's a search bar that you can use to filter the information on the table. For example, you can type 'wind' and then the table only shows 'wind speed' and 'wind direction' readings or you can narrow it down even further by typing 'wind speed'. The search bar works by clicking the 'Search' button OR by pressing 'Enter' key.

The second view has a table showing only the last 20 temperature readings, as well as, a red chart that is visualizing the data. Under the chart, there's some statistical information such as mean, median, mode, range and standard deviation for the data.

The third view is almost identical to the second view but instead of temperature, the measurement shown is 'humidity_in' and the chart is blue.

I also tried to make the website more responsive and user friendly by using CSS media queries. For example, when changing the width of the screen: the margins, font size, chart size and position, as well as, the navigation bar changes to make it look better for smaller screen

sizes. The navigation bar has a dropdown menu when the screen size is narrow enough. That and the tables were made with bootstrap but otherwise it's all self typed CSS.

I used many containers especially for views 2 and 3. Firstly, the table and chart are in a flex container and the chart is also in it's own flex type chart container with the statistical information. The statistical information is also a grid container that is filled with the different calculations.

There is one CSS file, three HTML files for different views and two JavaScript files. The script.js file contains most of the functionalities but the statistics.js has the functions for calculating the statistical informations and are imported to script.js. I added some comments to the JS files to make it more readable.

Self Evaluation

I think I learned quite a lot while doing this project and was able to get more confident with web development overall.

I had some problems with the TAMK Cloud API because some data was not working properly. The temperature readings weren't always accurate and the wind speed was always 0 m/s and the rain measurement stayed the same as well. Furthermore, I didn't understand what the rain measurement unit was supposed to be because the reading was always over 500 thousand.

In my opinion, the project could get grade 4 because I completed phases 1-3 really well, which totals 18+12+20 = 50 points and also ran the website on github pages (5 points), as well as, added the search functionality (5 points) which would be 60 / 74 = 81%. But my initial goal was grade 3 so I would still be happy with that.