

Project Description: TRIMM

Team 02

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General

The customer for the project is a company **TRIMM** that operates in the web development sector. They build, host and maintain complex web applications.

One of company's current projects is an application for real-time automated audio coaching advice for runners based on data from multiple on-body sensors. TRIMM's chief goal is to create an automated system which will help prevent injuries whilst running.

To enable more efficient analysis of collected running data and recognition of certain patterns, the company needs a data visualization dashboard. Therefore, our team's task in this project is to develop this dashboard with which the end user who has company's running sensors can effortlessly and seamlessly visualize and avail of the sensor data collected during their runs.

Data available

The running data available for the project was collected during 8 runs. It consists of:

- data from GPS tracker and heart rate monitor (this part of data is accessible via [strava.com](https://www.strava.com));
- data from on-body sensors (measures for 10 running characteristics, such as braking force and push off power);
- other data (surface type and running shoes used).

Requirements

The following requirements are obligatory to satisfy:

- The dashboard should be a responsive web application. It is imperative that for our dashboard we implement correct appearance and behaviour for phones, tablets and desktops/laptops. Therefore, we must have several designs that suit each device.
- The dashboard should provide an option to register and log in. The application should support two types of users: free and premium. Some features will be exclusive for premium users (for example, the ability to customize the appearance of the dashboard by moving data indicators around, removing or adding them).

- The dashboard should allow for sorting and filtering of the data to aid data analysis. All data should be visualized, including maps of runs from GPS tracker. To achieve that, we must conjoin the data from [strava.com](https://www.strava.com) and excel tables given, and create an optimal SQL database out of these sources.

There is also an optional feature that we intend to implement:

- Each of application's visualizations contains an export button which generates a dynamic greyscale infographic (600 by 800px) to be displayed on on-wall e-ink displays.