



FITNESS REPORT DASHBOARD

A CASE STUDY

Blackcoffer

CONSULTING

DERIVING BEAUTIFUL INSIGHTS



Objective of Project:



Dashboard was made for healthcare and medical purpose to use IoT and fitness devices to collect data.



Create a cloud dashboard for collection of user data for analytics and recommendation report.



Project Design:

Design:

1. Dashboard is being made to collect user activity data from their fitness product/Devices to cloud.

2. The data driven dashboard will generate weekly and monthly report regarding user activity.

3. The report will contain detailed information related to stated parameters.



4. Dashboard will help in pushing notification to user suggesting what can be done to improve their health report.

5. App will also help user in knowing irregular pattern in health to avoid alarming situations.

6. The data is collected on cloud and personalized report are generated with trained ML and AI

Data Parameters:



Height / Weight ratio (BMI)



Blood pressure



Glucose



Pulse, Normal and resting heart



Cholesterol



Body Temperature



Physical Activities: running, walking, climbing, swimming, resting, exercising



Sleep Pattern



Methodology:

1

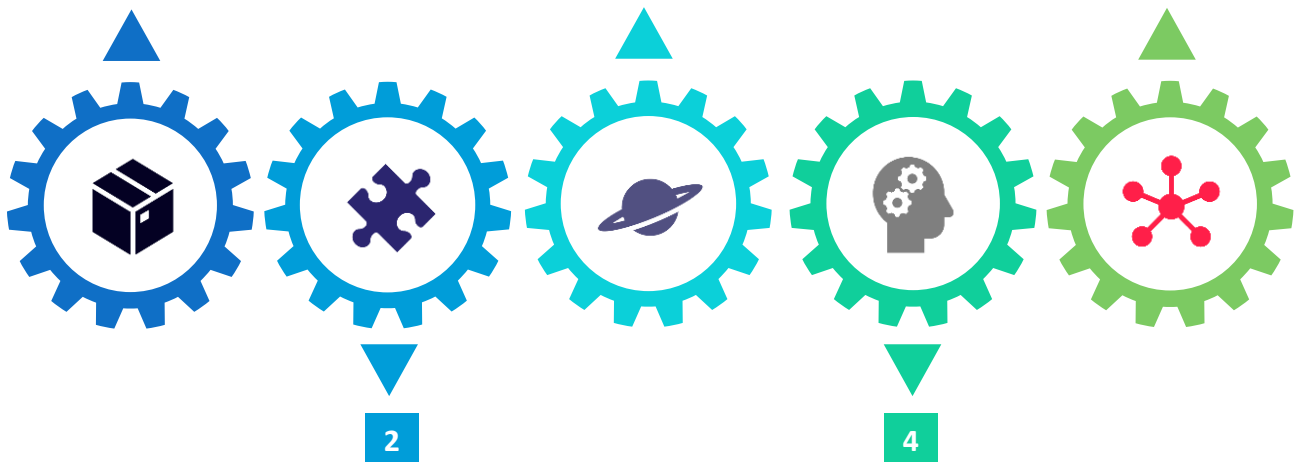
The Dashboard was made using many software tools like javascript, D3.js, dashboard development tools, for development, and R/Python were used for analysis, data models, and data pipelines.

3

In persona the data was collected by the product in set parameters and was sent to cloud and saved in a format.

5

And personalized recommendation was sent to user along with the report. The recommendation factor was trained using ML and AI, to give different recommendation on the basis of result.



The approach was simple use of persona/DNA and recommendation.

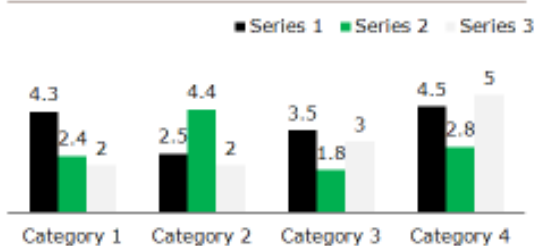
After the data is saved it was analyzed in data driven dashboard creating health reports and results.

Data Visualization and Interpretation:

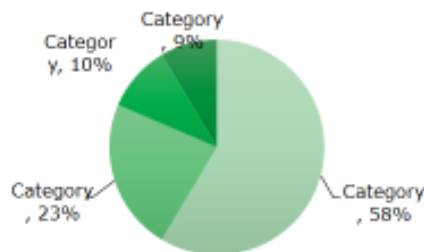
Data is collected from different parameters are visualized according to their category. The dashboard will show user data in following way. From within the dashboard user can generate his/her report.

Different Activity graphs

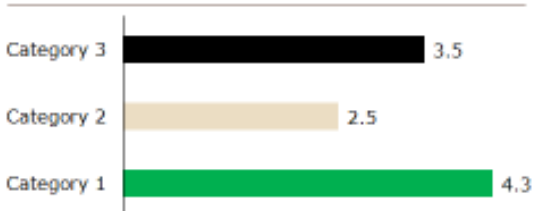
Bar charts, Units



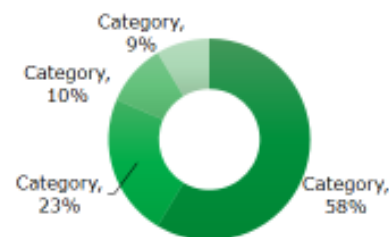
Pie chart, Units



Histograms, Units



Pie charts, Units



My Dashboard

My profile | Me | Challenges | Athletes

This week | SPORTS | All sports | Refine your results

John Smith
Rotterdam

24 ACTIVITIES | 5 CHALLENGES

- Dashboard
- Activities
- Challenges
- Teams
- Settings

ACTIVITIES

4

2 TO GO THIS WEEK

CALORIES

2350 kcal

500 TO GO THIS WEEK

DISTANCE

34 km

16 TO GO THIS WEEK

SUMMARY | CALORIES

MO TU WE TH FR SA SU

DIVISION | CALORIES

35%

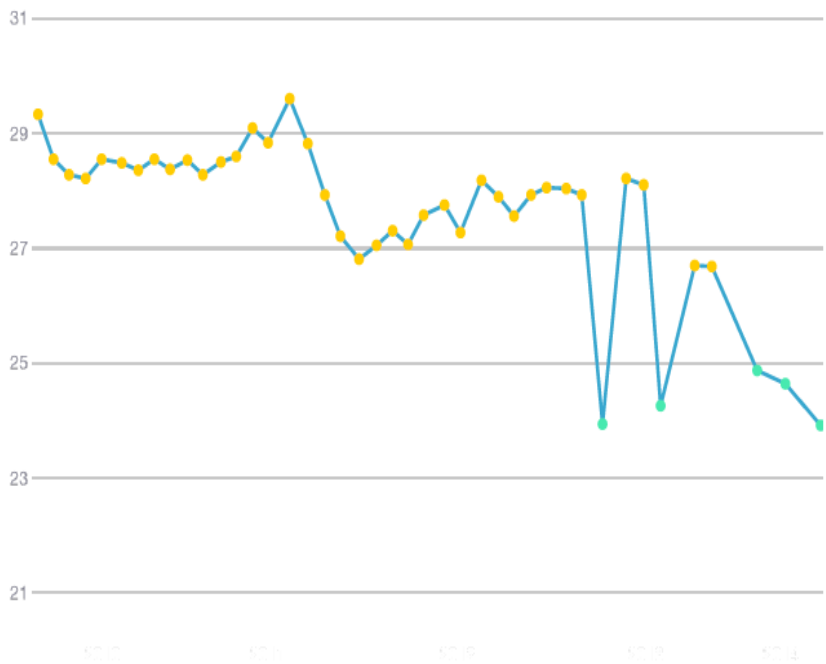
- Fitness
- Running
- Cycling
- Swimming
- Other

BMI (kg/m²)

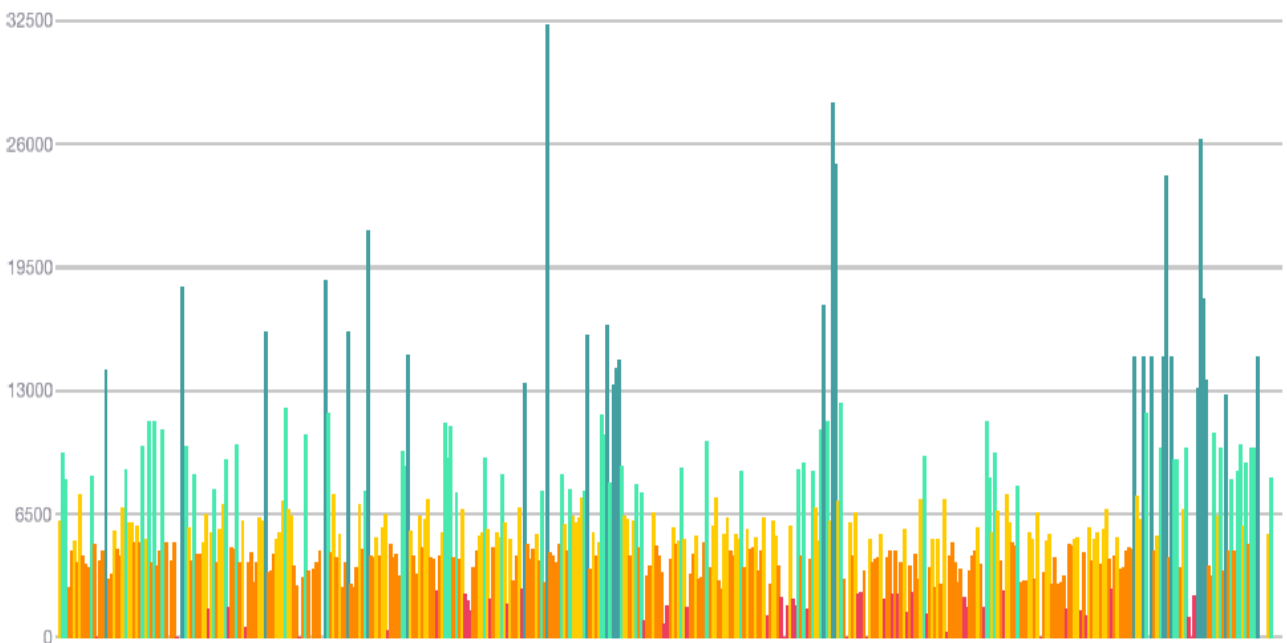
Last measured: 23.9 kg/m² - Normal - Wednesday

BMI **23.9** kg/m²
Normal

Super Obese	Greater than 40.0
Severely Obese	35.0 to 40.0
Obese	30.0 to 35.0
Overweight	25.0 to 30.0
Normal	18.5 to 25.0
Underweight	16.5 to 18.5
Severely Underweight	Less than 16.5



Steps





Future Scope of Project:

Current feature of dashboard includes:

- Save report to dashboard
- Send report by email
- Update and generate PDF reports
- Automation to send monthly report

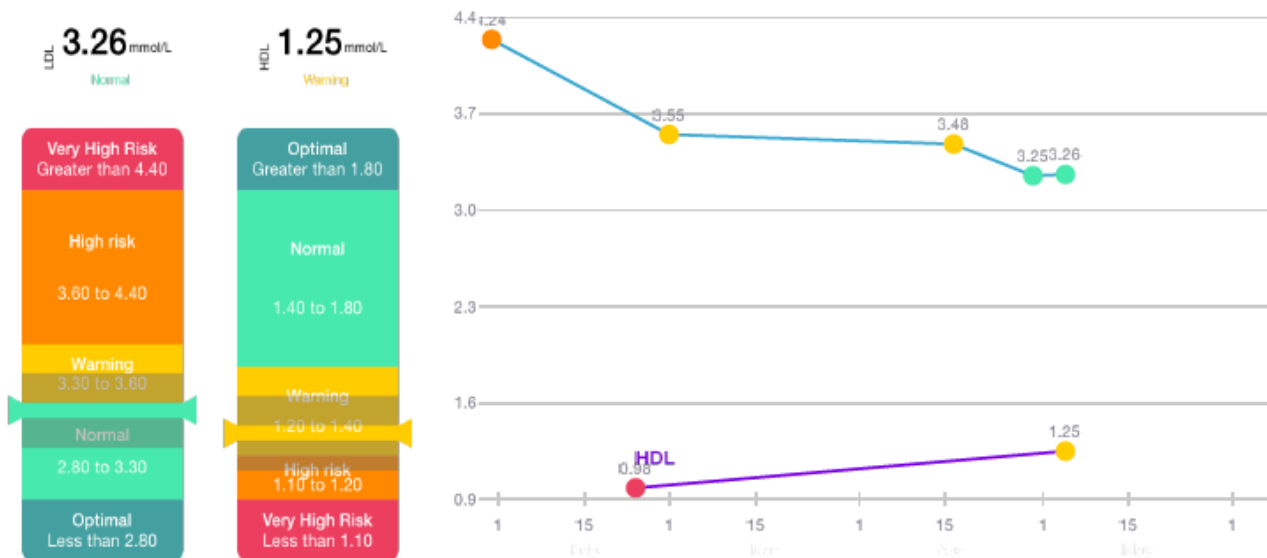
Current capabilities can record data of - Walking steps, Running distance, Calories burned, Types of exercises, Heart rate, Weight management, Sleep pattern.

In future it is estimated that app will be able to produce reports that is usable to doctors and medical treatment and following features will be added:

- Visualization of
 - Problems
 - Diagnosis
 - Medications
 - Procedure
 - Immunization
 - Allergies
 - Vitals
- Lab measures and recommendation

Total Cholesterol (mmol/L)

Last measured: 5.02 mmol/L - Normal - 04/05/14



♥ Total Cholesterol

Total Cholesterol is a computed value that is the sum of your LDL, your HDL and a portion of your Triglycerides (for mg/dl this is 20% - for mmol/l this is about 45%). It serves as an overall indicator of your cholesterol but to better understand your cholesterol, you should look into your LDL and HDL values, which are respectively known as the bad and good cholesterol.

😊 Lifestyle Tips to Improve

To improve your cholesterol, you should try to lower your LDL and increase your HDL.

To decrease LDL in your body, eat more fruits and vegetables, whole-grain bread/pasta, select fat-free milk products, lean meats and poultry (avoid eating the skin), eat fatty fish like salmon, beans and peas, some nuts (almonds/walnuts for example), replace butter with olive oil with your bread, when you cook, in your salads (avoid creamy sauces, go olive oil and try aged balsamic for great taste), be more active, aim for reaching 10,000 steps a day.

To increase HDL in your body, if you smoke, you should stop. Try to lose some weight, check you BMI and set yourself a new target weight, increase your level of physical activity by aiming at doing your 10,000 steps daily, eat more avocado and onions (avocado count as fruits also), omega-3 acids, soluble fibers (fibers are good for your body), soy products, avoid trans fats, hydrogenated oils & refined carbohydrates, use olive oil everywhere (Go discover olive oils, its the same pleasure as wine, coffee and chocolate, there are so many to taste, each a different experience)