KINNARI AJMERA & NIKOLAS KALOUMENO

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Required Skills:

Android Development or Responsive Web Design, Java, API integration, backend development, Basic Machine Learning, Human Centered Design, Project Management, Communications

Preferred Team Communications:

TBD

Data Sources:

Data can be derived from any user's Fitbit account using the Fitbit API (https://dev.fitbit.com/reference/web -api/basics/#overview) and needs to be converted to the desired FHIR format using the already available npm package. Some dummy data from Fitbit will also be provided to the students.

Other Items:

Project has time zone flexibility. Mentors and students will determine a good time for virtual meeting

Please refer to the project https://github.com/fhirfli/FHIR-FLI-web-platform **for help with development**.

Intellectual Property: TBD

ANALYSING THE EFFECT OF ACTIVITIES AND STEP COUNT ON SLEEP PATTERNS

A large amount of user data is generated from wearables and health applications. Fitbit is one such application that generates user related data such as sleep logs, activity logs, body height and weight etc. Analytics can be performed on this data to gain useful insights related to the user's health. The data from Fitbit can be converted to the standard FHIR format so that it can be used and recognized by multiple organizations across the world. The FHIR profiles and bundles for lifestyle data can be found on https://simplifier.net/FhirFli/~resources . The FHIR converter npm package to convert Fitbit data into FHIR format can be found on https://www.npmjs.com/package/fhir-converter.

PROJECT OBJECTIVES

1) Develop an app or web platform to pull data from Fitbit app using Fitbit API and integrate the converter npm package to convert the data into the FHIR format.

2) Perform analysis on the data and show the correlation between the activity performed, the number of steps taken by user and his sleep pattern. Eg: Consider which activity performed and for how much duration gives the soundest sleep to the user.

Provide recommendations to the user for improving sleeping habits based on the data available.

SUCCESSFUL PROJECT

Effective implementation of the listed objectives