Sprint Evaluation

What is the progress of your project in this sprint? What goals are achieved? What problems are overcome? If you are updating your plans what are your justifications?

- Got help from Uluc Saranli and Muhsin Civelek about hardware implementation.
- Assembled our first hardware component which is composed of accelerometer and Intel Galileo.
- Managed to show the changes in accelerometer data as serial output in a computer with the help of an Arduino script.
- Created a Python script to send the serial output from a computer to cloud component periodically via HTTP.
- Developed an API for fixed device running in cloud component which gets serial output and inserts the data to database.
- Developed an API for mobile device running on cloud component which provides data to be shown in mobile application
- Using the previous 4 points as infrastructure, developed an Android application which shows the accelerometer data; as we move accelerometer, we were able to observe changes of accelerometer in the application in real time.
- Added features to web application
  - Showing personal information, sensor data, based on time and sensor choice.
  - Showing analytics gathered by using machine learning.
- With the help of MPAndroidChart library, sensor data is visualised through a line chart.
- We presented our project to inform the class about our progress in fall term.

Justification

- We formerly decided to use arduino or pic to connect sensors and raspberry pi as intermediate device to gather data but we are currently using galileo upon the recommendation of Uluç Saranlı. It is convenient to use it now as it does not require extra analog to digital conversion and it has strong computing power.
- At the start of the year, we planned to work on wireless connection at this sprint but we could not manage because we could not get our sensors at the time we expected and also we decided for now to have less hardware dependency. So we are only using galileo for now.

Team evaluation

How well your is team working together? How many meetings did you hold? Are you planning any changes in your cooperation strategy? Which work is completed by which member (in a Gannt chart)?

We mostly work as a team. Other than weekly meeting with Burak Velioğlu and Adnan Yazıcı, we hold meetings 3 times a week. Also we hold Google Hangout meetings for the rest of the week. We try to divide works among members evenly and also early so that there will be no conflict between team members.

Hypnos   Newline

Task	Assigned Member	1st week	2nd week	3rd week
Assembling hardware component	Ozge, Esref, Baris, Oguzhan		X	X
Serial connection between hardware component and computer	Ozge		X	X
Developing script to push accelerometer data to cloud from computer	Ozge			X
Developing API on cloud for getting and inserting data from computer into database	Esref			X
Developing API on cloud for sending sensor accelerometer data to mobile	Esref			X
Developing android application which show accelerometer data real-time.	Baris			X
Enhancing web application with capability of showing personal information, sensor data, based on time and sensor choice.	Ozge, Esref, Baris, Oguzhan	X	X	X
Enhancing web application with capability of showing analytics gathered by using machine learning.	Baris	X	X	
Data visualization on mobile with MPAndroid	Baris		X	X
Prepare presentation	Esref, Baris, Ozge, Oguzhan		X	X
Present the project	Oguzhan			X
Team Web Page	Oguzhan		X	X

Backlog Updates

What are your backlog updates?

Our backlog updates can be seen on Open Project. Related tasks are:

TASK #871 - Presentation
TASK #996 - Initialization of fixed device interface on cloud component
TASK #1018 - Get accelerometer data
BUG #1039 - Webapi main page not shown correctly
TASK #1038 - Monitoring accelerometer data on galileo
TASK #1040 - Monitoring accelerometer data on android
TASK #1041 - Transferring accelerometer data from galileo to server
TASK #1042 - Accelerometer integration to system
TASK #1043 - Adding notes to selected range on chart
TASK #1044 - Revision of android application
TASK #1045 - Adding mpandroid chart library to android
TASK #1048 - Efficient data transfer from web to other platforms
TASK #1071 - Preparing Web Page