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?

- We have a Django Server working on a Digital Ocean Server. It has 2 different APIs to communicate with web browsers and mobile application. It has user authentication and data visualization parts.
- We developed a basic android application communicating with the mobile API.
- We developed a database which contains sensor data about 5 million rows of various sensors. We are collaborating with Doc. Dr. Huseyin Gulec about interpretation of sensor data.
- While we continue our literature research, we have found some academic works about interpretation of sleep and contacted them.
- One of the features of our system is helping with diagnosis of sleep disorders. In order to do that. we are trying to create mathematical models of the correlation between sleep and sensor data. We examined International Sleep Disorder Standards by AASM, and found that it only contains simple descriptions of the symptoms, which doesn't fit our needs.
- To establish correct mathematical models, we all started learning and applying machine learning. We applied Decision Tree Classifier and Support Vector Machine methods on the sensor data.

Justification

- Our supervisor Adnan Yazici suggested that our system can be also used for diagnosis of various disorders, which doesn't exist in our plans at the beginning, and encouraged us to focus our studies on detecting disorders as much as possible.
- Since our sensors has arrived just this week, we had to change our schedule about sensor setup and related development. Instead, we focused more on mobile &web development and data analysis.
- To show information in a more detailed way, we decided to add a web part to our plans.

So, we changed our plans accordingly.

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. We do not plan to have changes in our cooperation strategy for now.

Task	Assigned Member	1st week	2nd week	3rd week
Sample application of numpy and scipy libraries on some sensor data	Baris	✓	✓	
Sample android application development	Oguzhan	✓	✓	
Learning and applying Decision Tree Classifier on sensor data	Esref,Ozge,Baris,Oguzhan	✓	✓	

Following Coursera Machine Learning Course week 1 to 3	Esref,Ozge,Baris,Oguzhan	✓	✓	✓
Learning and applying Support Vector Machine on sensor data	Baris,Oguzhan		✓	✓
Making Django Server Web API capable of authentication and data visualization	Esref,Ozge	✓	✓	
Making Django Server Web API capable of showing selected sensor & ML results	Baris, Oguzhan			✓
Making Django Server Mobile API capable of authentication	Ozge		✓	✓
Initialization of Android aplication	Esref		✓	✓

Backlog Updates

What are your backlog updates?

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

1) 348 - adding login page to cloud webapi
2) 349 - Having Django run on Apache
3) 352 - Reinterpretation of eeg data
4) 369 - Review of Task #348: adding login page to cloud webapi
5) 373 - Get hands dirty with numpy and scipy
6) 384 - Django Eeg model commit review
7) 389 - Review of Task #373: Get hands dirty with numpy and scipy
8) 396 - Visualization with highcharts
9) 400 - Review of visualization with highcharts
10) 467 - Applying SVM on accelerometer data
11) 492 - Get hands dirty with Android
12) 497 - Logout page commit review
13) 493 - Adding logout to web part
14) 531 - Base html adding commit review
15) 588 - Applying DTC on accelerometer data
16) 594 - Creating a sample dashboard
17) 595 - Review of creating a sample dashboard
18) 617 - Initialization of Android application
19) 618 - Review of android initialization
20) 687 - Learn Django Basics
21) 696 - Review Django Basics
22) 714 - Authentication of user in android
23) 715 - Django mobile api for authentication
24) 716 - Django api for profile page in android
25) 717 - Creating profile page in android
26) 739 - Profile Page on Django
27) 740 - Adding accelerometer data to database and using it as default
28) 741 - Separating different sensor data between different graphs
29) 742 - Analytics Page on Django