

Project Report 1.

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Deliverables.

- Deliverables until Friday, 11 November 2016.
 - Diagrams of the system.
 - Examples of Chapter 1 and Chapter 2.
 - Extensive planning for November.
 - Presentation.
 - Questions.
- Deliverables done until this meeting.
 - Diagrams of the system.
 - Extensive planning for November.
- Deliverables pending.
 - Examples of Chapter 1 and Chapter 2. Expected to be done on this **Friday, 4 November 2016**.
 - Presentation. Expected to be done on next **Monday, 7 November 2016**.
 - Questions. Expected to be done on **next week meeting**.
- Miscellaneous done.
 - Kaldi yes and no tutorial.
 - Pitch and volume detection, but using Java.



- There would be three milestones based on scenarios.
 - The ideal case scenario.
 - The minimal case scenario.
 - The realistic case scenario.
- Ideal case scenario would be if I have unlimited/spare amount of resources (energy, knowledge, money, and time).
- Minimal case scenario would be the minimum requirement for the prototype.
- Realistic case scenario would be the what I want to achieve for this project.

System Requirement.

Minimum case requirements.

- Functionalities.
 - Able to detect face.
 - Knows voice duration.
 - Knows voice volume.
 - Records voice.
 - Sends voice data to server.
- Hardwares.
 - USB microphone.
 - Raspberry PI 3.
 - Server.
 - Web cam.
- Softwares.
 - Simple connection of client and server through HTTP or WebSocket.
 - Retrieve data from server to clients.
 - Store data from nodes to server.
 - Sync time between all nodes.
 - OpenCV face detection to detect face to face conversation.
 - Python Audio Analysis for determine duration and volume.

Realistic case requirements.

- Functionality.
 - Add.
 - Able to check existence of other people with badge within range.
 - Proof of concept visualization.
- Hardwares.
 - Add.
 - RF receiver.
 - RF transmitter.
 - WiFi dongle.
 - Change.
 - Raspberry PI 3 with Raspberry PI Zero.
- Software.
 - Proof of concept visualization.

Ideal case requirements.

- Functionalities.
 - Add.
 - Able to check distance of face to face conversation.
 - Able to know body movement.
 - Able to visualize data on the badge itself.
 - Proof of concept, implementation.
- Hardwares.
 - Add.
 - Electronic ink display.
 - Proximity sensor.
 - Xyz sensor.
- Software.
 - Add.
 - Speech recognition using Kaldi.

November planning.

Week 1.

- Tuesday, 1 November 2016.
 - I will get monitor for my Raspberry PI.
 - I will start installing operating system to Raspberry PI.
- Wednesday, 2 November 2016.
 - I will work on draft for Chapter 1.
 - I will start creating barebone project for Python Audio Analysis.
- Thursday, 3 November 2016.

- I will work on draft for Chapter 2.
- I will start replicating my Java sound processing code into Python.
- Friday, 4 November 2016.
 - I will make Chapter 1 and Chapter 2.
 - I will submit Chapter 1 and Chapter 2.
 - I will test the sound processing code.
- Sunday, 6 November 2016.
 - I will work on draft for presentation.
 - I will start brainstorming on research questions.
- **This week milestone is that the system capable to determine pitch and volume using a microphone.**

Week 2.

- Monday, 7 November 2016.
 - I will make presentation.
 - I will submit presentation to GP supervisors.
 - I will make research questions into more feasible document.
 - I will start creating barebone project for OpenCV face detection.
- Tuesday, 8 November 2016.
 - I will revise presentation if necessary.
 - I will submit presentation to GP committee.
 - I will submit research questions to GP supervisor.
 - I will program the OpenCV face detection.
- Wednesday, 9 November 2016.
 - I will prepare presentation.
 - I will revise research questions if necessary.
- Thursday, 10 November 2016.
 - I will program the OpenCV face detection.
 - I will program the Open CV face detection to work with sound processing code.
- Friday, 11 November 2016.
 - I will submit research questions to GP committee.
 - I will program the OpenCV face detection.
 - I will program the Open CV face detection to work with sound processing code.
- Saturday, 12 November 2016.
 - I will test the OpenCV face detection together with the sound processing code.
- **This week milestone is that the system capable to detect face to face conversation.**

Week 3.

- Monday, 14 November 2016.
 - I will start creating barebone project for server using Python Django.
- Tuesday, 15 November 2016.
 - I will start creating database using MongoDB to store data from nodes (nodes are all sociometric badge within the network).
- Wednesday, 16 November 2016.
 - I will start creating database using MongoDB to store data from nodes (nodes are all sociometric badge within the network).
- Thursday, 17 November 2016.
 - I will make connection between server and nodes.
- Friday, 18 November 2016.
 - I will make connection between server and nodes.
- Sunday, 20 November 2016.
 - I will test to sending data from nodes to server and then store it in database.
- **This week milestone is that the system capable to have database filled with data sent from nodes.**

Week 4.

- Monday, 21 November 2016.
 - I will work to sync time stamp within all nodes and the server (I am thinking of an alternative solution for this actually).
- Tuesday, 21 November 2016.
 - I will work to sync time stamp within all nodes and the server.
- Wednesday, 21 November 2016.
 - I will try to make public API so data can be easily used by user.
- Thursday, 21 November 2016.
 - I will try to make public API so data can be easily used by user.
- Friday, 21 November 2016.
 - I will try to make simple website to display the API.
- **This week deliverable is that all nodes always has same time stamp.**