**MINUTE**

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| Date: 19.03.2019 | Time: 13:00 | Place:**PŁ, B9, room 352** |

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| **Meeting called by:** | Mariusz Pisarski | **Note taker:** | Yuri Shcheoholiev |
| **Facilitator:** | Piotr Napieralski | **Leader:** | Michał Suliborski |
| **Attendees:** | Michał Suliborski, Ania Preczyńska, Yuri Shcheoholiev, Mariusz Pisarski | | |
| **Meeting purpose:** | Discussion on the collected research materials | | |

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| **Agenda item:** | Presenting the results of the research considering general perception of emotions | | | | |
| Leader: | Anna Preczyńska | | | | |
| Discussion: | Ania was first to speak and she presented the following ideas:   * It turned out that the emotions are not so easy to describe. Especially because they are complex and connected to each other. She supported that idea with a emotion wheel picture and questioned the accuracy of emotional depth description. * Measuring bio-processes is a hard and expensive process. She provided an exemple of MIT leading researchers using a so called „space suit” full of high quality sensors in order for measurements to be precise. | | | | |
| Conclusions: | Unfortunately the idea of QR Radio was dismissed, due to its poor availability and huge costs of the device. We need to do another research about the devices that we can use to measure the emotion level. | | | | |
| Action items: | Writing an email to our supervisor asking for the devices we can use. | Person responsible: | Anna Preczyńska | Deadline: | 26.03.2019 |

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| **Agenda item:** | Presenting the results of the research considering types of biofeedback and ways to obtain them | | | | |
| Leader: | Mariusz Pisarski | | | | |
| Discussion: | Mariusz stated that the biofeedback is a process of getting information about persons emotional state using the information given by persons body systems. After it Mariusz told us about different types of devices used for specific measurements of body process, such as temperature rise, blood pressure, etc. | | | | |
| Conclusions: | Special devices are needed in order to gather enough information to detect emotion. | | | | |
| Action items: | -------------------- | Person responsible: | -------------------- | Deadline: | -------------------- |

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| **Agenda item:** | **Affective computing** | | | | |
| Leader: | Yurii Shcheholiev | | | | |
| Discussion: | Yurii continued the dicussion with the topic of his research. First he explained what affective computing term states for and how it is related to our project. Provided some examples of possible applications and possible fields of implementation, like robotic pets improvement, systems which detect the unstable emotional state of people leading to danger for society(anger during driving). | | | | |
| Conclusions: | Affective computing is study that makes human-robotic interactions more human and personal, improves an AI’s understanding of humal emotions. | | | | |
| Action items: | -------------------- | Person responsible: | -------------------- | Deadline: | -------------------- |

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| **Agenda item:** | **Presenting and explaing the idea behind machine learning** | | | | |
| Leader: | Michał Suliborski | | | | |
| Discussion: | Michał explained how the machine learning works in general with providing some examples(apples and oranges). Than he presented the 3 most simple and used algorithms of the machine learning:   * Tree * k-NN(Eucliaring distanse) * Node to node   Next he followed up with Pythone code examples of a machine learning based only on for 4 examples which was deducing if an object is an orange or an apple. | | | | |
| Conclusions: | We got to know the machine learning technology possibilities therefore we could reasonably state possible course of the project. | | | | |
| Action items: | presenting working demo of machine | Person responsible: | Michał Suliborski | Deadline: | 26.03.2019 |

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| **Agenda item:** | Discussion considering further direction of project development | | | | |
| Leader: | Michał Suliborski | | | | |
| Discussion: | Everyone shared their ideas and after thorough discussion we decided on course of the project | | | | |
| Conclusions: | We decided to write a mobile application detecting emotions and test its accuracy using biofeedback detecting devices | | | | |
| Action items: | further research considering machine learning | Person responsible: | Michał Suliborski | Deadline: | 26.03.2019 |

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| **Date of the next meeting:**  26.03.2019 |

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| **Special notes:** |  |