**QUIZ SHEETS ROUND 1: Manipulation/nudging**

TEAM NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In 2014 Facebook undertook a massive experiment (in collaboration with researchers) where they manipulated the newsfeed of nearly 700,000 users. Some individuals were only shown positive emotional content from others in their social network whereas others were shown only negative posts. What do you think happened? (Just guess the following answers if you don’t know):

1. The results of this experiment were…….. (1 POINT).

1. Those who saw only negative posts, posted more negative content themselves and vise versa.

2. How do you think the researchers measured what happened? In other words – what would have been the ‘main thing’ that they looked at to see whether their manipulation of showing positive or negative news feeds had any effect on the FB users? Select from following (1 POINT)

* Asked the users to report how sad/happy they felt.
* Analysed the number of positive vs. negative posts by users.
* Analysed the type of websites the users browsed afterwards.

3. This study raised some important ethical issues – can you think what they were? (2 points).

1. Privacy of users who signed up for FB. No informed consent process.

2. Playing with human emotions/manipulating emotions/AI filters can have lasting effects on human emotions.

**QUIZ SHEETS ROUND 2: Emotional Robots**

TEAM NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Emotions help people decide what is important and make our decision-making more complex (we are not purely rational). So it might be useful to try to make a robot that has emotions too. However understanding human emotions is actually very difficult.

1. Watch the short clips of the two robots. Which one do you think most people have the most pleasant emotional response to? Why is this important? (2 POINTS)
2. People like the cute one but not the life like one
3. Important because these might be used as carers, nurses, doctors etc so we need to have a good emotional response to them.

When they get to a point where they very closely resemble humans, but aren't quite identical to us, many people tend to react negatively to them. Then, if they look more-or-less identical to humans, they become more comfortable with their appearance again. That area where they’re *almost* human, but not quite, shows up as a dip – the 'valley' – in graphs measuring human responses to robots' appearance. Developing a robot that doesn’t make our skin crawl, and which looks physically comforting, is just as important as developing one that can express emotion.

To get an idea of what we’re talking about, take a look at [Sophia](http://www.sophiabot.com/) above, and tell us you’re not feeling a little freaked out. Developing a robot that doesn’t make our skin crawl, and which looks physically comforting, is just as important as developing one that can express emotion.

1. How would we go about getting robots to perceive human emotions? What do you think are some of the key markers of human emotion that a robot could learn to pick up on? (2 POINTS)
2. Body language, facial expressions, tone of voice, sensing changes in physiology (heart rate etc).

Several sensing approaches for emotion recognition have been used in the literature. Vision-based sensors appear to be the most widely used, focusing on facial expressions and body gesture analysis; however they present limitations in case of irregular light sources and target person not in front of the camera or in movement, thus preventing their use in real social robotics applications. Physiological sensors provide direct information at autonomic nervous system level, however they suffer from possible bias due to age-related and disease conditions; additionally they are still obtrusive in terms of wearability, thus resulting not usable and acceptable for daily living activities.

**QUIZ SHEETS ROUND 3: Filters, bias and AI**

TEAM NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

It’s great that algorithms can learn our patterns of behavior and likes and dislikes because it means that our internet searches are tailored for us, our social media newsfeeds are tailored for us and we can rely on AI to do basic tasks – like scanning a whole pile of job applications and picking the one we would like best – right? Well actually, there are some downsides to the application of machine learning to real life contexts.

1. Can you think of situations where watching a video on YouTube once and then having similar suggestions constantly appear might be a problem? (1 POINT for each answer, max 2 points)

People can become radicalized if they watch many extreme videos, it’s an echo chamber

If someone is researching suicide and then more suicide videos are shown (this happened in the UK, parents trying to sue YouTube because “YouTube algorithms decided she should die and tried to encourage her”).

Same for any negative behaviours such as anorexia etc.

1. Does your team think it matters whether different people get different results when they google search the same search terms? Why? (1 point).

No right or wrong answer although the ‘truth’ becomes harder to work out if everyone is being told different answers around things such as climate change, whether men can be feminists etc etc. It makes different groups further away from each other because they all believe their own ‘truth’.

1. In 2018 Amazon scrapped development of an AI algorithm that would learn patterns and words from job applications (CVs) of previous successful software engineer hires and then applying those characteristics to new job applications that they received. What do you think was a major problem here? (1 POINT).

Although they wanted to recruit more women, the algorithm was trained almost exclusively on men’s CVs so things such as “world champion women chess player” was marked as being a negative trait by the algorithm because the word ‘women’ had not appeared on any of the CVs it was trained on. So the algorithm learned previous biases and continued to apply them.

Bias: allowing unconscious feelings or thoughts to bias decision-making, even if we don’t want to. These biases end up in our decisions – e.g. when deciding who to hire a manager might (unintentionally) favour the person with the male name or the last name that is more familiar to their culture. If you ask them why they made the decision they pull out other key points from the CV – but crucially if the names are changed on the CV, they would have chosen the other one. It involves shaping the information in front of you to fit your biased worldview – even if you REALLY don’t want to be that biased person!

Nice link to follow up for students if interested in this: <https://www.ted.com/playlists/514/the_inherent_bias_in_our_techn>

**QUIZ SHEETS ROUND 4: Attentional Distraction by reward**

TEAM NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Watch the demonstration.

1. Can you think of a real life example (involving technology) where this sort of attentional distraction by reward happens? (1 POINT)

1. Targeted advertising in your internet browser

1. Why might this be a problem? (2 POINTS)

Problem for people who are trying to be healthy/avoid alcohol

Getting distracted all the time means that we are not achieving our tasks as well as we could.

1. What do you think would happen if participants in this experiment were offered $100 for good performance? (i.e. correctly identifying the rotated image on most trials). Select from the following (1 POINT).
   * Perform better
   * Perform the same
   * Perform even worse [the higher the stakes, the harder it is to ignore]
2. What do you think would happen if people practiced this task many times? Select from the following (1 POINT).
   * Perform better
   * Perform the same
   * Perform even worse

**QUIZ SHEETS ROUND : Gaming/Internet Addiction**

TEAM NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Internet gaming disorder is a ‘condition for further study’ in the official handbook of psychological disorders (The Diagnostic and Statistical Manual for mental disorders; DSM). This means that although it is not yet recognized as an official mental disorder, it may well be included in the future alongside alcohol and substance use addiction. Many doctors are pushing for the inclusion of this in the DSM, because they see so many cases of gaming/internet addiction.

1. Why do you think it is important to have gaming/internet addiction officially recognized in the DSM? (1 POINT)

People can get help that they need – insurance etc.

1. What is one major difference between an addiction such as alcohol or substance use addiction and a gaming/internet addiction? (1 POINT)

Substances have a direct pharmacological effect on the brain – you are ingesting something. Gaming you are not putting anything in there, it is just behaviour.

1. There are specific criteria in the DSM that are used to identify those who are addicted to gaming versus those who just really enjoy playing but are not addicted. Can you think of what they might be? [max 5 POINTS]
2. Continuing to play, even when it causes problems in relationships.
3. Wanting to cut down but not being able to.
4. Craving and urges that you can’t control
5. Not managing to do what you should at school, work or home because of gaming.
6. Giving up important social or recreational activies because of gaming.
7. Withdrawal symptoms, irritability etc.

It’s basically about compulsive behaviour, that continues despite negative consequences, feelings of helplessness, failing in other areas of life but unable to stop etc etc.