United International University
Department of Computer Science and Engineering
SOC 2101: Soc., Tech. and Engg. Ethics   Final Exam. : Spring 2022

Total Marks: 25   Time: 1 hour 30 minutes

Any examinee found adopting unfair means will be expelled from
the trimester / program as per UIU disciplinary rules.

Answer all the 5 questions. Numbers to the right of the questions denote their marks.

1. There is a company named Mozilfro which has an online store from which user buys daily groceries. The developer of the website Dixon got some request to change the design of the website. The change request was simple enough: replace the web site's rounded rectangle buttons with arrows and adjust the color palette to one that mixes red and green text. But when Dixon looked at the prototype, he found it confusing. The left arrow suggested that the web site would go back to a previous page or cancel some action; instead, this arrow replaced the button for accepting the company's default product. The right arrow, on the other hand, upgraded the user to the more expensive category; it also silently added a protection warranty without asking for confirmation. Dixon suggested to his manager that this confusing design would probably trick users into more expensive options that they didn't want. The response was that these were the changes requested by the client. Shortly after the updates were released into their production system, Dixon's team was invited to a celebration. As a result of these changes, revenues at their client had increased significantly over the previous quarter. At the celebration, Dixon heard some of the client's managers discussing the small increase for refunds by users who claimed that they didn't want the protection plan, but there weren't many. Also the red and green text obscured important disclaimers about the product.

   List the violated ACM codes of ethics with only one line of reason from the given scenario.   [5]

2. Describe the weaknesses of Facebook's privacy policies and features. What kinds of ethical concerned are associated with the data collection and sharing policies of FacebooK?

   - User decides how much information they feel comfortable sharing on FB and user control how it is distributed through their privacy settings
   - FB is also a service for sharing information on FB enhanced applications and websites.User can control how they share information with those third party applications and websites through their application settings
   - FB allows advertisers to select characteristic of users they want to show their advertisement to and FB use the information users share with FB to serve those advertisements

   [5]

3. Artificial intelligence algorithms meant to detect and moderate hate speech online, including the Perspective algorithm built by Google, have built-in biases against black people.

   Scientists from the University of Washington found alarming anti-black bias in the AI tools that are supposed to protect marginalized communities from online abuse, according to New Scientist — demonstrating how a well-intentioned attempt to make the internet safer could discriminate against already-marginalized communities.

   The scientists examined how humans had annotated a database of over 100,000 tweets that had been used to train anti-hate speech algorithms, according to yet-unpublished research. They found that the people responsible for labeling whether or not a tweet was toxic tended to flag tweets written in African-American Vernacular English (AAVE) as offensive — a bias that then propagated down into the algorithms themselves.

   What type of bias is introduce here? Is this bias very harmful? What can be done to get rid of this bias?   [5]

4. During the COVID-19 pandemic live video streaming/video conferencing services experienced an enormous jump in usage numbers primarily due to widespread popularization of complete or partial *work-from-home* policies introduced by businesses. The technology seemed so indispensable at the time that even educational institutions of all levels joined the bandwagon and started holding academic activities online. People also started to participate in social gatherings online. Though initially regarded as a temporary solution, most people got so used to it that even after the pandemic restrictions are lifted many people still prefer to partake in their daily activities *from home* rather than *in person*. The argument being online activities save time other resources. This mentality is mostly common among large city dwellers. But in retrospect, it can also be argued that this change can weaken normal societal bonds making people feel alone and more antisocial. Also if not handled with care this can lead to a detrimental effect on minors and teenagers. They might waste there valuable time and energy engaging in unproductive tasks on online platforms.

   Now, in what ways do you think online conferencing technologies impacted our social lives? Divide this impacts into pros and cons. Also support your opinions with necessary facts and data .

   [5]

5. *Technotrash*, also called electronic waste or e-waste, is any broken or unwanted electrical or electronic device, and is currently the most rapidly-growing type of waste. Unknown to many consumers e-waste can be toxic, is not biodegradable and accumulates in the environment, in the soil, air, water and living things. The consequences of improper e-waste disposal in landfills or other non-dumping sites pose serious threats to current public health and can pollute ecosystems for generations to come. When electronics are improperly disposed and end up in landfills, toxic chemicals are released, impacting the earth's air, soil, water and ultimately, human health.

   Discuss what effects e-waste has on the environment and it's inhabitants? Also analyze the possible measures that can be taken by industries and governments to mitigate it's negative impacts.   [5]