

Homework Assignment: Montreal Declaration Principles

Description

A homework assignment, titled Homework 09 - Montreal Declaration Principles, was designed to examine students' understanding of the Montreal Declaration Principles. In the assignment, besides questions about the definitions of certain principles, multiple small synthetic case studies are included with underlying ethical issues and students are required to identify these issues based on the Montreal Principles framework.

Quiz Questions

1. "AIS development must produce social and economic benefits for all by reducing social inequalities and vulnerabilities." is a criterion in which of the following Montreal Declaration principles?
A. Equity
B. Democratic Participation
C. Diversity Inclusion
D. Solidarity
2. How many principles are there in the Montreal Declaration?
A. 10
B. 9
C. 11
D. 12
3. Which one of the following is not a Montreal Declaration principle?
A. Awareness & Literacy
B. Respect for Autonomy
C. Prudence
D. Responsibility
4. According to the Responsibility principle in the Montreal Declaration, by whom is the decision to kill made?
A. Only human beings, and responsibility for this decision must not be transferred to an AI
B. Only human beings, yet responsibility for this decision can be transferred to an AI
C. Both human beings and AIs, but mostly human beings
D. AIs are entitled to the decision to kill
5. AIs hardware, its digital infrastructure and the relevant objects on which it relies, must minimize our impact on ecosystems and biodiversity at every stage of its life cycle to comply which of the following principles?
A. Sustainable Development
B. Prudence
C. Responsibility
D. Equity
6. AI systems used in mortgage lending have been accused of discriminating against minority borrowers by charging them higher interest rates or denying loans based on biased risk assessments. Which of the following principles is violated?

- A. Equity
 - B. Prudence
 - C. Respect for Autonomy
 - D. Sustainable Development
7. Company X launched a cutting-edge AI technology, namely R2-D2, to assist surgeons during intricate surgeries that call for utmost precision. In the most recent report, the technology was found to lack the required precision. Company X withheld the information on the report from the public and proceeded to promote R2-D2 to local hospitals. Which of the following principles is company X violating?
- A. Prudence and Well-being
 - B. Well-being
 - C. Prudence
 - D. Responsibility
8. BestBuddy is a social media platform created by Bud Inc., who agreed to abide the Montreal Declaration for a Responsible AI. Recently, public authorities have received numerous complaints indicating that BestBuddy is inextricably linked to leading users to extreme conspiracy content. To investigate the matter, public authorities request access to BestBuddy's algorithm. How should Bud Inc. proceed?
- A. **Signing the Montreal Declaration, Bud Inc. is obliged to ensure that the code for algorithms, whether public or private, must always be accessible to the relevant public authorities and stakeholders for verification and control purposes, according to Democratic Participation principle.**
 - B. Bud Inc. reserves the right to deny the request, on the grounds that the algorithm is their intellectual property and not subject to public scrutiny.
 - C. Without providing the algorithm, Bud Inc. should present how BestBuddy functions to public authorities.
9. Buzzy is a recently developed social media platform that has set the trend among teenagers. Buzzy, among 271 other companies, signed the Montreal Declaration for Responsible AI. Mrs. Kenobi has lately observed a significant rise in her 10-year-old son's Buzzy usage, and he's been slacking off at school. With tremendous concern regarding her son's mental health and performance at school, Mrs. Kenobi reached out the Buzzy's customer service to have her son's Buzzy account deleted. As it turned out, Buzzy does not offer users the ability to permanently delete their accounts. Not allowing users to delete their accounts, is Buzzy on the wrong?
- A. **Yes, as indicated in the Protection of Privacy and Intimacy principle.**
 - B. Yes, as indicated in the Diversity Inclusion principle.
 - C. No, since users' accounts are property of Buzzy and users are not entitled to changes made to the accounts.
10. In [this](#) medical article, scientist found that arterial blood oxygen saturation as measured by pulse oximeter devices may be differentially less accurate for people with darker skin pigmentation, which could potentially affect the course of coronavirus disease 2019 (COVID-19) treatment. Pulse oximetry systematically overestimated blood oxygenation by 1% more in non-Hispanic Black/African American individuals than in non-Hispanic White individuals. Which of the following principles is most likely violated by pulse oximeter manufacturers?

- A. Diversity Inclusion**
- B. Responsibility
- C. Sustainable Development
- D. Respect for Autonomy

Assessment

The learning outcomes of this assignment align with the Understanding Different Ethical Perspectives/Concepts and Ethical Issue Recognition rubrics of AACU (aacu.org) and for that reason, this assignment will be evaluated on the Evaluation of Different Ethical Perspectives/Concepts rubric.