

Ethical AI Knowledge Assessment Questions

Answers are highlighted.

1. What are some of the concerns regarding AI technology? (Select all that apply)
 - a. AI technology is susceptible to adversarial attacks.
 - b. AI technology can be biased.
 - c. There is no such concern.
 - d. AI technology can discriminate.
 2. ***Which societal challenge is frequently mentioned in the context of AI?
 - a. lack of investment incentives in the educational system
 - b. chip shortage in industry due to the high computational cost of AI
 - c. high error rate in AI-enabled manufacturing
 - d. replacement of human workforce by AI
 3. ***What are central risks in using AI for predictive policing?
 - a. Vulnerability to hacking
 - b. Discrimination against suspects based on origin and status
 - c. Lack of legal certainty in the event of AI breakdown
 - d. Undermining the authority of police officers
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1. Which of the following terms defines a system as being capable of simulating human intelligence and thought processes?
A. Deep Learning B. Machine Learning C. Artificial Intelligence D. Neural networks
 2. Select the concept that best describes the responsible AI principle that AI must not impose a particular lifestyle on individuals and that people should be able to fulfill their own individual moral objectives.
A. Autonomy B. Well-being C. Privacy D. Solidarity
 3. "In all areas where a decision that affects a person's life, quality of life, or reputation must be made, the final decision must be taken by a human being" is the keystone concept of which of the following Principles of Responsible AI?
A. Autonomy B. Responsibility C. Privacy D. Prudence
 4. Which of the following principles outlines that AI must be designed and trained to not create, reinforce, or reproduce any form of discrimination and must produce benefits for all by reducing social inequalities and vulnerabilities?
A. Prudence B. Democratic Participation C. Equity D. Diversity

5. Select **ALL** the following items that name a recognized set of principles that outline the ethical and responsible use of AI technology.
- A. **Montreal Declaration** B. Archimedes Principle C. Asimov's Three Laws
D. **UNESCO Ethics of AI** F. **OECD AI Principles**
6. The Principle of Diversity in responsible AI outlines which of the following concepts?
- A. The development of AI must be inclusive and reflect the diversity of the individuals and groups of society.
- B. AI development and usage must not lead society toward being the same in regard to a specific thought or idea.
- C. AI must not be developed or used with the aim of limiting the free expression of ideas or diverse opinions.
- D. All the provided concepts are covered in the principle of Diversity.**
7. The use of AI to develop untrustworthy information, lies, or propaganda would violate which of the following principles of responsible AI usage?
- A. Privacy **B. Autonomy** C. Equity D. Prudence
8. A private company created AI software that tracks how their employees use their time on company computers. The company informed all employees that they were going to install this software and monitor computer usage but did not specifically outline what metrics the software was calculating. The upper administration of the company uses the data collected from the AI software to rank the employee's individual performance and decide to terminate the lowest performing employees without considering any other work-based metrics, merit, or any other factors.

Which of the following part(s) of this situation violates the principles of ethical and responsible use of AI?

- a. The use of surveillance software on company computers.
- b. Not outlining exactly what metrics the software was going to monitor and calculate.
- c. Ranking the employees based on the scores from the software.
- d. Using only the AI software generated score to decide which employees to terminate.**

- e. Every action in this situation was ethical and responsible.
9. A large department store is using electronic billboards to advertise their products inside a local mall. To better select ads, the department store has informed its customers that every purchase made in store will be matched to a facial recognition scan. Additionally, the store is going to install facial recognition scanners on billboards. This way, the store can select relevant ads to show on the billboards based on who is walking by at any given time.

Which of the following part(s) of this situation violates the principles of ethical and responsible use of AI?

- a. The fact that the billboard facial recognition scanners will scan anyone that walks by the billboard.
 - b. The lack of anticipation that the software will generalize ads based on similar facial features, thus causing racial and ethnic bias in ads.
 - c. The use of AI to maximize company profits.
 - d. Every action in this situation was ethical and responsible.
10. A supervisor requires an employee to create a detailed project to overcome a specific problem that the company is encountering and instructs the employee to use all available tools to complete the task. The employee uses a commercially available AI program to generate project ideas in a brainstorming session. One of the ideas looks very promising and the employee refines the idea by eliminating unneeded items that do not apply to the situation, adds additional steps to the project to maximize future outcomes, and submits the finalized product as their own work to the supervisor.

Was this an ethical and responsible use of AI?

- a. Yes
- b. No