

Name: _____

Date: _____

Wired Wisdom: A High-Voltage 10th Grade AI Quiz

Analyzing how black-box algorithms and reinforcement learning shape modern ethics before students tackle their next independent tech ethics project.

1. In the context of AlphaGo's victory over Lee Sedol, which learning paradigm allowed the system to discover strategies previously unknown to human experts?

- A. Supervised Learning
- B. Reinforcement Learning
- C. Static Rule-Based Logic
- D. Linear Regression

2. Convolutional Neural Networks (CNNs) are primarily designed to process sequential data like audio and text due to their iterative feedback loops.

- A. True
- B. False

3. The concept of "_____ " refers to the inherent difficulty in understanding exactly how a deep learning model reached a specific decision or output.

- A. Algorithmic Transparency
- B. The Black Box Problem
- C. Data Normalization
- D. Gradient Descent

4. Which of the following is an example of 'Edge AI' implementation, focusing on localized processing rather than cloud-based analysis?

- A. A smart thermostat adjusting temperature without an internet connection
- B. A web browser translating a page using a remote server
- C. A social media feed ranking posts based on global trends
- D. An email service filtering spam on its central headquarters server

5. Artificial General Intelligence (AGI) currently exists and is used by logistics companies to manage global supply chains autonomously.

- A. True
- B. False

6. When a facial recognition system performs poorly on certain demographics due to a lack of variety in its training data, this is known as:

- A. Backpropagation Error
- B. Hyperparameter Tuning
- C. Algorithmic Bias

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D. Overfitting

7. In the context of generative AI, the term _____ refers to the AI confidently generating false or nonsensical information.

- A. Encoding
- B. Hallucination
- C. Distortion
- D. Synthetics

8. A 'Turing Test' is passed when a machine can successfully simulate human conversation to the point where a judge cannot distinguish it from a human.

- A. True
- B. False

9. Which mathematical concept is most fundamental to how neural networks adjust their internal weights to minimize error during training?

- A. Geometry
- B. Trigonometry
- C. Calculus (Derivatives)
- D. Number Theory

10. The use of AI to create highly realistic but fake video or audio recordings of people is known as a _____.

- A. Deepfake
- B. Data Shadow
- C. Neural Print
- D. Digital Phantom