

### Comprehension MCQ:

What is the main challenge in AI systems?

- A. Biased data
- B. Designing an algorithm
- C. Creating synthetic data
- D. None of the above

How can biases in training data be addressed?

- A. Use diverse and representative datasets
- B. Develop fairness constraints
- C. Use adversarial learning
- D. All of the above

What is one consequence of biased training data?

- A. AI systems become more accurate
- B. AI systems become less effective
- C. AI systems become less transparent
- D. None of the above

What is adversarial learning?

- A. Training an algorithm on synthetic data that contains a wide range of biases
- B. Developing fairness constraints to ensure the algorithm's output is consistent with the desired outcome
- C. Using diverse and representative datasets to train the algorithm
- D. None of the above

What is a potential bias in the design of an algorithm?

- A. Prioritizing speed over accuracy
- B. Using diverse and representative datasets
- C. Developing fairness constraints
- D. None of the above

What is the importance of transparent and explainable algorithms?

- A. They allow for scrutiny of the logic behind an algorithm's output
- B. They are more effective at producing accurate predictions
- C. They require less diverse datasets
- D. None of the above

How can biases be mitigated in AI systems?

A. By promoting diversity and inclusion in the AI field

C. By using adversarial learning

B. By developing more transparent and explainable algorithms

D. All of the above

Why is it essential to promote diversity and inclusion in the AI field?

A. To create more inclusive and equitable AI systems

C. To reduce the need for diverse datasets

B. To make AI systems more accurate

D. None of the above

What is the main source of bias in AI systems?

A. The algorithm's design

C. Both A and B

B. Biased training data

D. None of the above

What is the purpose of fairness constraints?

A. To ensure that the algorithm's output is consistent with the desired outcome

C. To decrease the accuracy of an algorithm

B. To increase the speed of an algorithm

D. None of the above

What is the benefit of using diverse and representative datasets to train AI algorithms?

A. They help to reduce bias in the algorithm's output

C. They are more cost-effective than synthetic data

B. They make the algorithm more opaque

D. None of the above

Why are biased AI systems a concern?

A. They can lead to unfair and discriminatory outcomes

C. They are too transparent

B. They are always inaccurate

D. None of the above

