

Student

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Case-Based Questions

1. Case Scenario:

In a corporate setting, a multinational company is facing scrutiny over its environmental practices, particularly regarding the disposal of industrial waste. The company has historically prioritized profit maximization and cost-cutting measures, leading to practices that result in environmental harm and negative impacts on local communities. As public awareness and concern about environmental sustainability grow, stakeholders, including investors, customers, and advocacy groups, are calling for the company to adopt more responsible and sustainable business practices.

Question

Drawing from the case presented, analyze the ethical considerations surrounding the company's environmental practices through the lens of value-based frameworks in ethics.

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Case-Based Questions

2. Case Scenario:

In a rural farming community, a group of small-scale farmers is faced with a dilemma regarding the use of pesticides on their crops. The farmers have traditionally relied on chemical pesticides to control pests and maximize crop yields. However, concerns have been raised about the potential environmental and health impacts of pesticide use, including soil contamination, water pollution, and adverse effects on human health. Additionally, neighboring communities and environmental advocacy groups have expressed opposition to the widespread use of pesticides, citing ecological damage and risks to biodiversity.

Question

Using the case provided, examine the ethical considerations surrounding pesticide use in the agricultural sector, applying ethical frameworks to analyze the competing interests and values at stake.

1.1. What is the purpose of defining the problem statement during the Problem Scoping stage in an AI project cycle?

- A) To collect data
- B) To understand the aim and objective of the project
- C) To train the model
- D) To process data

2. In what ways can AI models be categorized based on the type of data fed into them?

- A) Two domains
- B) Four domains
- C) Three domains
- D) Five domains

3. In Statistical Data, what is the primary function of the system in relation to data?

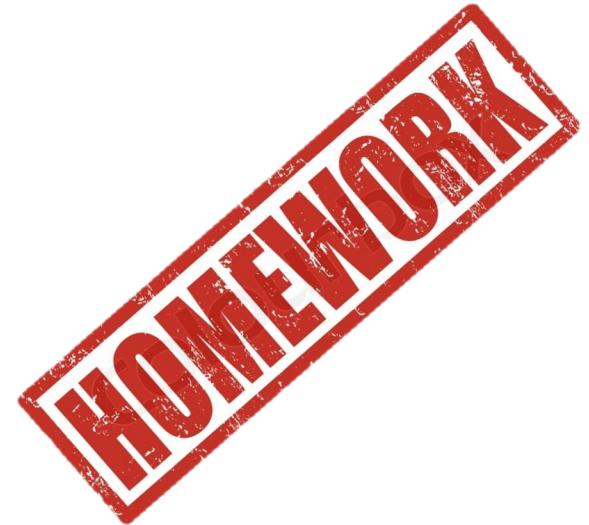
- A) Generating large datasets
- B) Analyzing data to extract insights
- C) Converting data into images
- D) Distributing data across networks

4. What is the main goal of Computer Vision projects?

- A) Translating audio data into visual descriptions
- B) Converting digital data into analogue signals
- C) Teaching machines to understand textual information
- D) Converting digital visual data into computer-readable language

5. What is the primary focus of NLP?

- A) Analyzing computer languages
- B) Interacting between computers and humans using artificial language
- C) Dealing with the interaction between computers and humans using natural language
- D) Enhancing human-to-human communication



6. What do frameworks provide in the context of problem-solving?

- A) Random solutions
- B) Step-by-step guidance
- C) Legal advice
- D) Ethical justifications

7. How are Ethical Frameworks for AI categorized?

- A) Into legal and illegal frameworks
- B) Into sector-based and value-based frameworks
- C) Into historical and contemporary frameworks
- D) Into theoretical and practical frameworks

8. What is the central focus of virtue-based value-based frameworks?

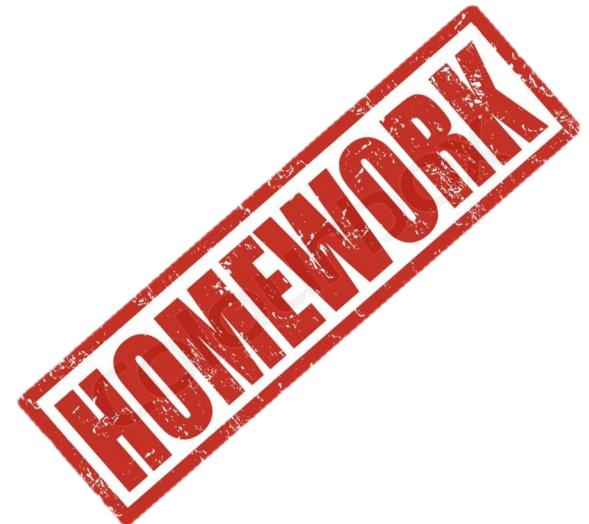
- A) Maximizing utility
- B) Protecting human rights
- C) Aligning actions with ethical principles and beliefs
- D) Ensuring compliance with legal regulations

9. Which of the following best describes rights-based value-based frameworks?

- A) Prioritizing human rights and dignity, valuing human life over other considerations
- B) Evaluating actions based on maximizing overall good and minimizing harm
- C) Centering on the character of the decision-maker and the alignment of actions with personal or societal virtues
- D) Focusing on achieving outcomes that offer the greatest benefit

10. What is the primary domain of application for Bioethics?

- A) Agriculture
- B) Healthcare and life sciences
- C) Information technology
- D) Environmental conservation



11. Assertion: Ethics provide guidance in distinguishing right from wrong.

Reasoning: Ethics consist of a set of values and morals that aid individuals in making moral judgments and decisions.

- A) Both Assertion and Reasoning are true, and Reasoning is the correct explanation of the Assertion.
- B) Assertion is true, but Reasoning is false.
- C) Both Assertion and Reasoning are true, but Reasoning is not the correct explanation of the Assertion.
- D) Assertion is false, but Reasoning is true.

12. Assertion: Value-based frameworks in ethics provide guidance by focusing on fundamental ethical principles and values.

Reasoning: These frameworks reflect different moral philosophies guiding ethical reasoning and are concerned with assessing the moral worth of actions.

- A) Both Assertion and Reasoning are true, and Reasoning is the correct explanation of the Assertion.
- B) Assertion is true, but Reasoning is false.
- C) Both Assertion and Reasoning are true, but Reasoning is not the correct explanation of the Assertion.
- D) Assertion is false, but Reasoning is true.



Reflection Time:

HOMEWORK

- 1.** Outline the main steps in the AI Project Cycle briefly.
- 2.** What roles does computer vision play in agricultural monitoring systems?
- 3.** Mention the factors which knowingly or unknowingly influence our decision-making.
- 4.** What is the necessity for Ethical Frameworks in AI development?
- 5.** Mention the key characteristics of sector-based frameworks.
- 6.** What do you mean by Bioethics?
- 7.** What is Natural Language Processing? Explain any two real-life applications of NLP.
- 8.** How do value-based frameworks contribute to ethical decision-making by emphasizing fundamental principles and values?

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How does ethical framework applies to the following sectors:
Education, Agriculture,
Transport, Governance,
Law Enforcement.

HOMEWORK

-Use appropriate AI tools to find answers

Guidelines (Homework, Student Portfolio)

1. **Homework:** Use the AI notebook (Classwork) to answer the questions such multiple choice, short answer questions.
2. **Student Portfolio # 1:** "Choose one of the two given questions and write your answer on A4-sized sheets with a cover page. Handwritten submissions only—printed copies will not be accepted."
3. **Student Portfolio # 2:** “write your answer on A4-sized sheets with a cover page. Handwritten submissions only—***printed copies will not be accepted***.”