

CodeAI Plus

Windows 10 with Office 2019

Also compatible with Office 2016



- | | |
|-------------------------|----------------------------|
| Artificial Intelligence | Multidisciplinary Approach |
| Animated Life Skills | Subject Integration |
| Coding | Art Integration |
| Computational Thinking | Skill Formation |
| Experiential Learning | Linked with SDGs |



Answer Key

SELF-EVALUATION

A. Tick (✓) the correct answer.

1. (b) John McCarthy
2. (c) AlphaGo
3. (a) Stanford Cart
4. (a) Data Scientist
5. (b) Pollution

B. Write 'T' for True and 'F' for False statements.

1. False
2. False
3. True
4. False
5. True

C. Fill in the blanks.

1. Freddy
2. 2018
3. Autonomous
4. Q
5. Machine Learning Engineer

D. Differentiate between the following.

Machine Learning Engineer and Business Intelligence Developer

Machine Learning Engineer	Business Intelligence Developer
It is one of the most prominent professions in the field of AI. These engineers are responsible to develop and manage machine learning AI systems.	It is also one of the most sought-after careers these days. They are responsible to analyze data for the prediction of present and future market trends.

E. Answer in 1-2 sentences.

1. AI technology is used in the entertainment industry for predicting the taste and preferences of viewers.

2. AI in healthcare is used to improve the quality of life and save people. By using AI, doctors can easily analyze X-rays or scans of patients, choose appropriate treatment and give better consultation to the patients.
3. The two skill set required for the job of Machine Learning Engineer are-
 - a. Good knowledge of programming languages
 - b. Good knowledge of data science

F. Answer briefly.

1. The career opportunities available in the fields of AI system are- Data Scientist, Machine Learning Engineer, Business Intelligence Developer.
2. AI systems can be used for both constructive as well as destructive purposes. Bots can be used by fraudsters to perform automated logins with the goal of compromising user accounts. These systems can also be misused by cyber criminals for hacking data and causing potential damage.
3. AI systems have been raising serious ethical issues all over the world. These issues exist in two forms: Data for AI systems and Implications of AI systems. These issues can be divided into two categories are:
 - a. Privacy Concern: Data collection is one of the most serious implications of AI systems that comes under the category of privacy concern.
 - b. Adoption Concern: One of the major concerns related to the adoption of AI systems is its impact on employment and the workforce.
 - (i) Future of Jobs
 - (ii) Security

G. Application-based Question.

He should choose Machine Learning Engineer career in the field of the Artificial Intelligence.

Chapter – 10 [Future Possibilities of AI]

Worksheet - 1

Q1. Put your knowledge to the test by choosing the right option:

1. What term was coined by John McCarthy in 1956 to represent the field of artificial intelligence?
 - a. Machine Learning ☐
 - b. Computer Vision ☐
 - c. Robotics ☐
 - d. Artificial Intelligence ☐
2. Which AI technology is widely used in the entertainment industry for predicting viewer preferences?
 - a. Natural Language Processing ☐
 - b. Machine Learning ☐
 - c. Computer Vision ☐
 - d. Deep Learning ☐
3. Which job role involves analyzing data for predicting present and future market trends in business?
 - a. Data Scientist ☐
 - b. Machine Learning Engineer ☐
 - c. Business Intelligence Developer ☐
 - d. AI Researcher ☐
4. What is the major concern related to the adoption of AI systems mentioned in the chapter?
 - a. Job Loss ☐
 - b. Increased Productivity ☐
 - c. Skill Shortage ☐
 - d. Economic Growth ☐
5. Who is considered the Father of Artificial Intelligence for his pioneer role in the field?
 - a. Alan Turing ☐
 - b. John McCarthy ☐
 - c. Garry Kasparov ☐
 - d. Elon Musk ☐

Q2. Fill in the blanks:

1. The first computer-controlled autonomous vehicle, Stanford Cart, was built in _____.
2. AI technology plays an important role in programming by enhancing the productivity of programmers through suggesting _____.

3. Google's AI AlphaGo gained recognition by beating world champion _____ in the board game Go.
4. The ethical concerns related to the implications of AI systems can be divided into two categories: Privacy Concern and _____.
5. The skill set needed for a Data Scientist includes adequate knowledge of Big Data platforms like _____.

Chapter – 10 [Future Possibilities of AI]

Worksheet - 2

Q1. Define the following.

1. AI in Healthcare -
.....
2. AI in Entertainment -
.....
3. AI in Coding -
.....
4. Artificial Intelligence -
.....

Q2. Write 'T' for true and 'F' for false statements:

1. AI technology is not used in the entertainment industry for predicting the taste and preferences of viewers. ☐
2. The development of self-driving vehicles heavily relies on AI to operate automatically and optimally. ☐
3. Shakey, a robot built at Stanford Research Institute in 1969, was equipped with vision and problem-solving abilities. ☐
4. The primary role of a Business Intelligence Developer is to develop and manage machine learning AI systems. ☐
5. Google Bard is mentioned as a Chatbot released in the year 2023. ☐

Chapter – 10 [Future Possibilities of AI]

Worksheet - 3

Q1. Answer the following questions:

1. What is the timeline of key milestones in the evolution of AI?
2. Name three career options in the field of AI and provide the specific skills sets required for each?
3. Explain the role of AI in the health care industry?
4. In which fields is AI expected to have a significant impact in the future?
5. What ethical concerns are associated with the implications of AI systems?

Q2. Application Based Questions.

1. Identify and elaborate on at least three fields that will be significantly impacted by AI in the future. Discuss the potential applications and benefits of AI in these fields.

2. Identify and elaborate on at least three fields that will be significantly impacted by AI in the future. Discuss the potential applications and benefits of AI in these fields.

Worksheet – 01

Q1. Put your knowledge to the test by choosing the right option:

1. d 2. b 3. c 4. a 5. b

Q2. Fill in the blanks:

1. 1979 2. code syntax 3. Ke Jie 4. Adoption concern
5. Hive, MapReduce

Worksheet – 02

Q1. Define the following:

1. **AI in Healthcare:** The vision of AI technology is vast in the healthcare industry as it aims to improve the quality of life and save people. With the help of AI, doctors can easily analyze X-rays or scans of patients, choose appropriate treatment and give better consultation to the patients.

2. **AI in Entertainment:** AI technology is widely used in the entertainment industry for predicting the taste and preferences of viewers. The various OTT platforms or online music platforms use AI for marketing or trading aspects that include advertising, design, and film promotion.

3. **AI in Coding:** AI technology plays an important role in programming because it enhances the productivity of programmers by suggesting appropriate code syntax at the time of programming. Many programming languages, like Python, have AI-enabled tools which can easily detect bugs while coding.

4. **Artificial Intelligence:** The term Artificial Intelligence was coined by John McCarthy at an academic conference he organized in Dartmouth College in 1956 to discuss the subject. He is widely considered as the Father of Artificial Intelligence for his pioneer role within the field.

Q2. Write 'T' for true and 'F' for false statements:

1. F 2. T 3. T 4. F 5. T

Worksheet – 03

Q1. Answer the following questions:

1. **AI in Military:** AI provides simulation and training applications to the soldiers which give them a real-time virtual experience of the troubles and problems faced during military operations.

2. The three career options in the field of AI are-

1. **Data Scientist:** Data scientists are the professionals who make value out of data. They fetch information from large data sets and analyze it for better understanding. The skill sets needed for this job are as follows:

- a. Adequate knowledge of Big Data platforms like Hive, MapReduce, etc.
- b. Knowledge of modern and statistical programming languages
- c. Strong analytical skills.

2. **Machine Learning Engineer:** Machine learning engineer is one of the most prominent professions in the field of AI. These engineers are responsible to develop and manage machine learning AI systems. The skill sets required to pursue a career in this field are:

- a. Good knowledge of programming languages
- b. Good knowledge of data science
- c. Strong mathematical skills

3. **Business Intelligence Developer:** Business intelligence developer is also one of the most sought-after careers these days. They are responsible to analyze data for the prediction of present and future market trends. The specific skill sets required for these jobs are:

- a. Good knowledge of query tools

- b. Knowledge of data modelling and data mining
- c. Ability to translate business requirements into technical requirements.

3. **AI in Healthcare:** The vision of AI technology is vast in the healthcare industry as it aims to improve the quality of life and save people. With the help of AI, doctors can easily analyze X-rays or scans of patients, choose appropriate treatment and give better consultation to the patients.

4. The place where AI may have the biggest impact in the near future is self-driving vehicles (AI in Transportation/Surveillance).

5. Privacy concern and Adoption concern are associated with the implications of AI systems.

Q2. Application Based Questions.

1.

AI in Healthcare: The vision of AI technology is vast in the healthcare industry as it aims to improve the quality of life and save people. With the help of AI, doctors can easily analyze X-rays or scans of patients, choose appropriate treatment and give better consultation to the patients.

AI in Coding: AI technology plays an important role in programming because it enhances the productivity of programmers by suggesting appropriate code syntax at the time of programming. Many programming languages, like Python, have AI-enabled tools which can easily detect bugs while coding.

AI in Military: AI provides simulation and training applications to the soldiers which give them a real-time virtual experience of the troubles and problems faced during military operations.