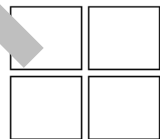


Azure AI Fundamentals

Instructor Guide



Microsoft

Instructor Guide

Sample Only

Overview

Course Structure

The course is structured to learn by doing, practice the learned skill, and then apply the skills.

- Unit
 - Lesson
 - Learn Tasks
 - Practice Exercises
 - Practice Questions
 - Objective Assessment
 - Create Project

Each unit contains lessons. The lessons are introduced by lesson topics where learners can understand through doing or learning through study materials (eBook, QuickDecks or QuickClips). Each lesson concludes with a Practice Exercise that incorporates the tasks they learned throughout the lesson. Once they have completed the lessons in the unit, learners are assessed through a question-based Objective Assessment and a Create Project.

Delivery

The course is created so it can be customized to meet the needs of the instructor and the learner.

- **Direct Instruction:** Use the PowerPoint Presentations to introduce each lesson topic, then have the learners review the study materials and complete the task.
- **Flipped Classroom:** Learners complete online lessons outside of class time. Learners utilize the class time to discuss learned tasks, allow learners to teach concepts, expand concepts through learning stations, and work on unit extension or unplugged activities.
- **Learner-Centered approach:** Use the prescriptive learning model so learners can focus on new skills and skip the skills they already know. Learners can work at their own pace on their own schedule to complete the course. Instructors support learners by utilizing the answer key to identify struggles and guide learners through the solutions.

Differentiation

Study Materials: Study materials are available in eBook, QuickDecks and QuickClips format. Each study material provides the same concepts and allows the learners to choose the modality that best fits their learning style. The eBook introduces concepts in bite-sized readings. QuickDecks display materials in a flashcard format. QuickClips provide a video and audio-based clip.


- **Course Progression:** Learners can complete the learn task to demonstrate understanding before reviewing the study materials or they can review one or all the study materials before attempting the learn tasks.
- **Grouping:** Create groups for different learning levels or styles. Customize each group setting to best meet the needs of the learners.
- Provide struggling learners with answer keys to follow step-by-step instructions to complete tasks and exercises.
- Encourage learners to showcase their newly learned skills by creating additional real-world projects, teach others how and why to use new skills, and explore beyond their learning.

Prepare for Delivery

- Begin with the unit overview to understand the structure and flow of the unit, the topics covered, the approximate time to complete and the end form objectives reviewed.
- Review the lesson PowerPoint Presentation to give you an in-depth look at each lesson topic and the comprehensive topic notes included.
- Review the answer keys to familiarize yourself with the tasks learners will complete throughout the lesson.
- Complete the lesson.

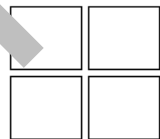
Instructor Resources Overview

<p>Instructor Resources File Structure</p>	<ul style="list-style-type: none"> 📁 Instructor Resources <ul style="list-style-type: none"> 📄 Course Syllabus 📄 Course Overview 📄 Course Key Terms 📄 Course Instructor Guide Unit <ul style="list-style-type: none"> 📄 Unit Assessment Answer Keys 📄 Create Project 📄 Objective Assessment Lesson <ul style="list-style-type: none"> 📁 Answer Keys <ul style="list-style-type: none"> 📄 Lesson Practice Exercises 📄 Learn Tasks 📄 Lesson Practice Questions 📁 Study Guides <ul style="list-style-type: none"> 📄 Study Guide Complete 📄 Study Guide Fill-In Explanation 📄 Study Guide Fill-In Topic 📄 Lesson PowerPoint Presentations 📁 Unplugged Activities 📄 Unit Overview 📄 Unit Learning Plan
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	 Unit Key Terms
Unit Assessment Answer Keys	<p>Each unit includes two types of assessments for learners to apply their knowledge.</p> <ul style="list-style-type: none"> • Create Project – These are project prompts and sample solution files. Create projects also include “show me” videos for learner reference. You have the option to enable/disable this feature. • Objective Assessment – A comprehensive question and answer-based assessment for the unit. Objective Assessments include “show solution” for learner reference. You have the option to enable/disable this feature.
Answer Keys	<p>Documents containing answers, step-by-step instructions, and correct answers for Instructor reference or to offer additional support material for learners.</p> <ul style="list-style-type: none"> • Learn Tasks - Each lesson topic includes an opportunity to apply what they have just learned in-app or by answering questions. Learn Tasks also include “show me” videos and “show solution” for learner reference. • Lesson Practice Exercises – End of lesson in-app or scenario-based assessment. Lesson Practice Exercises also include “show me” videos for learner reference. You have the option to enable/disable this feature. • Lesson Practice Questions – End of lesson question-based assessment. Lesson Practice Questions also include “show solution” for learner reference. You have the option to enable/disable this feature.
Study Guides	<p>Printable and customizable study guides mapped to lesson topics and exam objectives are provided in three formats.</p> <ul style="list-style-type: none"> • Complete- This version includes the topic and the explanation. • Fill-In Topic-Learners can fill in the topics as they learn or as a review. • Fill-In Explanation – This allows learners to complete the explanation of each lesson topic in their own words and images.
Learning Plan	<p>Customizable unit learning plan outlining the objectives and topics covered, essential questions, learning targets, methods and materials, extension activities, formative and summative assessments, mapping to STEAM, Work Readiness, 5 C’s, and Bloom’s Taxonomy Levels.</p>
Lesson PowerPoint	<p>A PowerPoint Presentation that complements the lesson. Each lesson topic is included in the presentation as well as comprehensive speaker notes.</p>
Pluggable Activities	<p>A variety of activities and necessary resources to get learners off the computers while still reinforcing unit learning objectives.</p>
Unit Key Terms	<p>A comprehensive list of key terms throughout the unit.</p>
Unit Overview	<p>A spreadsheet containing the overview of the flow of the unit that includes lesson topics, certification objectives mapping, and approximate timings for self-paced and instructor-led scenarios.</p>

Azure AI Fundamentals

Unit Guide



Microsoft

Unit	Lesson	Lesson Topic	Self Study	Instructor Led	Level	Objective Domain	Objective Description
Unit 2: Fundamentals of AI and Machine Learning							
Unit 2: Overview							
		Overview	5	5	1		
		Key Terms	5	5	1		
		Total Time	10	10			
Lesson 1: Common AI Workloads							
		Lesson Objectives	5	5	1		
		Anomaly Detection	5	15	1	Identify features of common AI workloads	Identify features of anomaly detection workloads
		Anomaly Detection in Azure	5	15	1	Identify features of common AI workloads	Identify features of anomaly detection workloads
		Computer Vision	5	15	1	Identify features of common AI workloads	Identify computer vision workloads
		Computer Vision in Azure	5	15	1	Identify features of common AI workloads	Identify computer vision workloads
		Natural Language Processing	5	15	1	Identify features of common AI workloads	Identify natural language processing workloads
		Natural Language Processing in Azure	5	15	1	Identify features of common AI workloads	Identify natural language processing workloads
		Knowledge Mining	5	15	1	Identify features of common AI workloads	Identify knowledge mining workloads
		Knowledge Mining in Azure	5	15	1	Identify features of common AI workloads	Identify knowledge mining workloads
		Practice Exercise	10	10	1		
		Practice Questions	20	20	1		
		Total Time	75	155			
Lesson 2: Core ML Concepts							
		Lesson Objectives	5	5	1		
		Dataset	5	5	1		
		Supervised Learning	5	15	1		
		Unsupervised Learning	5	15	1		
		Reinforcement Learning	5	15	1		
		Deep Learning	5	15	1		
		Practice Exercise	10	10	1		
		Practice Questions	20	20	1		
		Total Time	60	100			
Lesson 3: Principles of Responsible AI							
		Lesson Objectives	5	5	1		
		Fairness	5	5	1	Identify guiding principles for responsible AI	Describe considerations for fairness in an AI solution
		Reliability and Safety	5	15	1	Identify guiding principles for responsible AI	Describe considerations for reliability and safety in an AI solution
		Privacy and Security	5	15	1	Identify guiding principles for responsible AI	Describe considerations for privacy and security in an AI solution
		Inclusiveness	5	15	1	Identify guiding principles for responsible AI	Describe considerations for inclusiveness in an AI solution
		Transparency	5	15	1	Identify guiding principles for responsible AI	Describe considerations for transparency in an AI solution
		Accountability	5	15	1	Identify guiding principles for responsible AI	Describe considerations for accountability in an AI solution
		Risks and Challenges of AI	5	15	1	Identify guiding principles for responsible AI	Describe considerations for risks and challenges of AI
		Practice Exercise	10	10	1		
		Practice Questions	20	20	1		
		Total Time	70	130			
Unit 2: Summary							
		Summary	2	5			
		Key Terms	3	5			
		Total Time	10	10			
Unit 2: Assessments							
		Create Project	40	40			
		Objective Assessment	40	40			
		Total Time	80	80			
Total Time to Complete Unit							
		Minutes			485		
		Hours			8		

Microsoft Azure AI Fundamentals Learning Plan

Unit 2: Fundamentals of AI and Machine Learning

Instructor:

Class:

Duration: 5 to 8 Hours

Unit Objectives:

Learners will be able to identify and describe various AI workloads, apply key machine learning concepts, and evaluate AI projects for ethical, social, and legal implications. Additionally, learners will be prepared to apply these principles to real-world AI scenarios, fostering responsible AI development and deployment.

Essential Questions:

- What are the most common types of AI workloads, and how do they differ in terms of data processing and problem-solving?
- What are the fundamental concepts in machine learning, including algorithms, training data, and model evaluation?
- What are the principles of responsible AI, and why is ethical AI development critical for society and businesses?

Learning Targets:

I will understand the foundations of common AI workloads, the fundamental principles of machine learning, and the core tenets of responsible AI.

So I can effectively identify the right AI workload for diverse applications, apply machine learning techniques with proficiency, and assess AI projects for ethical and legal implications.

I know I have succeeded when I can articulate and discuss these foundational concepts in AI.

Methods and Materials:

- Lectures
- Reading
- Videos
- Hand-on activities
- Creating
- Analyzing
- Discussing
- Teaching

Formative Assessments:

- Learn Task
- Practice Questions
- Practical Exercises

Summative Assessments:

- Objective Assessment
- Create Project

STEAM

- Science
- Technology
- Engineering
- Art
- Math

Work Readiness

- Communication
- Problem-solving
- Teamwork
- Work ethic
- Empathy
- Conflict resolution
- Active listening
- Time management
- Adaptability
- Reading
- Mathematics

5 C's

- Critical Thinking
- Creativity
- Communication
- Collaboration
- Citizenship

Blooms Level

- Remembering
- Understanding
- Applying
- Analyzing
- Evaluating
- Creating

Learning Activities

Lesson	Time Allowed	Content
Lesson 1: Common AI Workloads	75-155 minutes	<ul style="list-style-type: none">• Anomaly Detection• Anomaly Detection in Azure• Computer Vision• Computer Vision in Azure• Natural Language Processing• Natural Language Processing in Azure• Knowledge Mining• Knowledge Mining in Azure
Lesson 2: Core ML Concepts	60-100 minutes	<ul style="list-style-type: none">• Dataset• Supervised Learning• Unsupervised Learning• Reinforcement Learning• Deep Learning
Lesson 3: Principles of Responsible AI	70-130 minutes	<ul style="list-style-type: none">• Fairness• Reliability and Safety• Privacy and Security• Inclusiveness• Transparency• Accountability• Risk and Challenges of AI

Warm-Up Activities

1. Think of a real-world problem, such as improving healthcare or reducing traffic congestion. Describe which AI workload you believe would be most effective in solving it and why.
2. Research one machine learning algorithm (e.g., decision trees, neural networks) and write a brief summary of its strengths and weaknesses.
3. Locate a real-world case study about an AI project facing ethical challenges. Write a concise summary of the case and jot down any ethical considerations that stand out to you.

Extension Activities

1. Create a portfolio for the course. Portfolios should include evidence of work, reflect on learned skills and how you can incorporate the skills in a current or future project. This is an ongoing extension activity. Continue to add to the portfolio throughout the course.
2. Select one topic learned throughout the unit then create an instructional video, tutorial, lecture, or hands-on activity to teach others about the skill.
3. Workload Comparison: Research and compare two different AI workloads, such as supervised learning and unsupervised learning. Create a detailed comparison chart outlining their key characteristics, use cases, and advantages.
4. Kaggle Challenge: Participate in a Kaggle competition or select a dataset from Kaggle to create your machine learning model. Practice feature engineering, model selection, and fine-tuning. Submit your results and share your experience.

Azure AI Fundamentals Unit 2 Key Terms

Term	Definition
Anomaly Detection	It identifies unexpected and unusual events. Anomalies can indicate errors, fraud, or other important insights in data.
Statistical Methods	They are one of the most used techniques for anomaly detection. They involve analyzing the statistical properties of a dataset and identifying observations that fall outside of the expected range.
Machine Learning	It involves training a model on a dataset and using it to identify observations that do not fit the expected pattern.
Rule-Based Methods	They involve defining a set of rules for identifying anomalies in a dataset. These methods are often used in systems where the expected behavior is well-defined, and anomalies are rare.
Hybrid Methods	They combine two or more of the above techniques to improve accuracy and obtain better results.
Azure Anomaly Detector	A cloud-based service that helps to detect anomalies in your time series data.
Computer Vision	The science that helps the computer to “see” and “understand” the content of digital pictures such as videos and camera photos. It is also known as CV.
Image Classification	Identifying the main object or scene in an image, such as a cat, a car, or a landscape.
Object Detection	Locating and classifying multiple objects in an image, such as people, vehicles, or animals.
Image Segmentation	Dividing an image into multiple segments or regions based on their visual properties, such as color, texture, or motion.
3D Reconstruction	Creating a 3D model of an object or scene from multiple 2D images. 3D reconstruction is used in applications such as augmented reality and virtual reality.
Optical Character Recognition	Recognizing and extracting text from images or scanned documents.
Facial Recognition	Identifying and verifying a person's identity based on their facial features.

Action Recognition	Recognizing and classifying human actions in a video, such as walking, running, or dancing.
Natural Language Processing (NLP)	The subfield of Artificial Intelligence studies the relationship between the computer and human language.
Knowledge Mining	The process of extracting useful information and insights from large volumes of data.
Dataset	The collection of data that a model will use for training.
Labeled Dataset	A dataset where each data point is associated with a corresponding output label or category.
Unlabeled Dataset	A dataset where the output labels are not provided. In this case, the machine learning algorithm must find patterns and structure in the data on its own, without the aid of explicit output labels.
Training Dataset	It is the first collection of the data that is used to train the machine learning model.
Validation Dataset	It is used to evaluate the performance of the model during the training process.
Testing Dataset	It is used to evaluate the final performance of the machine learning model. This dataset is not used during the training process and is completely separate from the training and validation datasets.
Supervised Learning	A subfield of machine learning where a model is trained using a labeled dataset, which means that the data is labeled with the correct answers or outputs.
Unsupervised Learning	A subfield of machine learning that enables models to identify patterns and relationships in data without explicit instruction or guidance from humans.
Clustering	Grouping data points together based on similarities in their attributes.
Reinforcement Learning	A subfield of machine learning. Reinforcement learning is based on trial and error using feedback from the model actions and experiences.
Deep Learning	A subset of machine learning. Deep learning involves using neural networks to learn complex patterns in that data.
Fairness	A part of the explainable and moral considerations related to the development and deployment of artificial intelligence systems that treat all individuals and groups fairly and without discrimination.
Fairlearn	A Python library that provides tools for assessing and mitigating bias in machine learning models.

Unit 2: Unplugged Activities Instructor Guide

Instructions

Below are a variety of offline activities to choose from to support learning in Unit 2. Choose activities to enhance learning in the classroom.

Activity 1: Word Search

Distribute pages 2-4 to the learners.

With Words - Use this word search to reinforce the key terms in Unit 2. An answer key is provided.

With Clues - Use this word search to challenge learners to find key terms in Unit 2 using clues. An answer key is provided.

Activity 2: Crossword Puzzle

Distribute pages 2-3 to the learners.

Have learners solve the crossword puzzle by reading clues and filling in the answer with key terms from Unit 2.

An answer key is provided.

Activity 3: Pass the Paper

Write or print each header and each answer on a separate piece of paper. Fold each answer paper.

Hand out one header to one learner and ask them to be at one side of the room while hiding the header paper they have.

Distribute randomly the answers where each learner gets one folded definition.

Once all headers/definitions are distributed, you can ask them to START.

Learners with the headers will hold them out so that their peers can observe them, while the rest of the learners will unfold the answers and head to the learner with the header that matches that answer.

Activity 4: Picture This Game

Write the following 3 concepts down on 3 pieces of paper for each group. Number each card from the out to 3 with the same number shown in the numbered list and place them face down on each table.

Divide the learners into balanced groups. Each group sits at one of the tables. Have them select one member to be the drawer.

The objective of the game is for one learner to draw the concept and have their group guess it. The learner is not allowed to say any words.



1

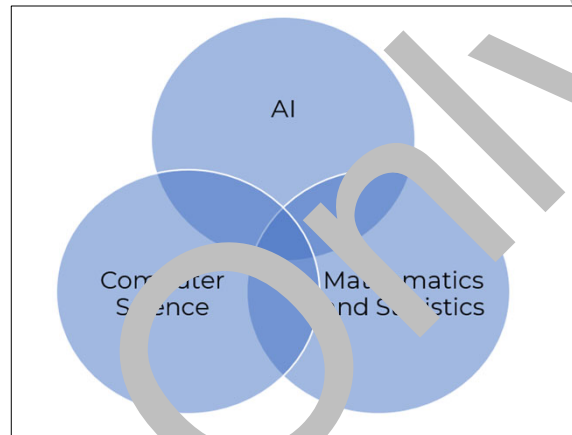
Lesson 2: AI Fundamentals

Unit 1: Cloud Computing and Artificial Intelligence

2

Artificial Intelligence Definition

A branch of computer science related to creating intelligent systems that simulate human cognitive abilities such as learning, reasoning and problem-solving



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3

History of Artificial Intelligence

- In 1956: term "Artificial Intelligence" was mentioned for the first time by computer scientist John McCarthy
- In the 1960s and 1970s, first AI programs were developed but they had limited abilities
- In the 1980s, AI experienced a decline known as the "AI winter"
- In 1997, IBM Deep Blue became first computer to be a world chess champion
- Nowadays, AI is used in various applications

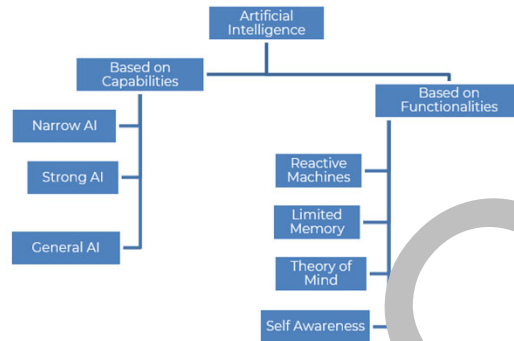
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Types of Artificial Intelligence



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Machine Learning Definition

Machine Learning (ML)

- Sub-category of Artificial Intelligence
- Field of computer science that allows computers to learn and make predictions without being explicitly programmed

Machine learning model

- Type of computer program that is designed to learn from data and make predictions or decisions based on that data

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6

Unit 2 Lesson 2 Study Guide Complete

Topic	Explanation
Dataset	
Dataset	The collection of data that a model will use for training.
Labeled dataset	Dataset where each data point is associated with a corresponding output label or category.
Unlabeled dataset	<ul style="list-style-type: none"> Dataset where the output labels are not provided. Machine learning algorithm must find patterns and structure in the data on its own, without the aid of explicit output labels.
Dataset format	<ul style="list-style-type: none"> Text data. Image data. Audio data. Video data. Numeric data.
Training dataset	First collection of the data that is used to train the machine learning model.
Validation dataset	It is used to evaluate the performance of the model during the training process.
Testing dataset	<ul style="list-style-type: none"> Used to evaluate the final performance of the machine learning model. Not used during the training process and is completely separate from the training and validation datasets.
Supervised Learning	
Supervised Learning	A subfield of machine learning where a model is trained using a labeled dataset, which means that the data is labeled with the correct answers or outputs.
Supervised Learning Steps	<ul style="list-style-type: none"> Collect labeled data. Split data. Train model. Evaluate model.
Unsupervised Learning	
Unsupervised Learning	A subfield of machine learning that enables models to identify patterns and relationships in data without explicit instruction or guidance from humans.
Clustering	Grouping data points together based on similarities in their attributes.
Clustering algorithms	<ul style="list-style-type: none"> They work by calculating the distance between each data point and all other data points in the dataset.

	<ul style="list-style-type: none"> Points that are closer together are grouped together into clusters.
Reinforcement Learning	
Reinforcement Learning	<ul style="list-style-type: none"> A subfield of machine learning. Based on trial and error using feedback from the model actions and experiences.
Reinforcement Learning elements	<ul style="list-style-type: none"> Environment: Place where the model is trying to learn. State: Situation of the model. Rewards: Feedback from the environment. Policy: Rule of how the environment gives the rewards. Value: Future reward.
Reward types	<ul style="list-style-type: none"> Point: Simple numeric rewards like +1 or -1. Score: Similar to points but on a larger scale. Success/failure: Binary rewards like +1 for success and 0 for failure.
Deep Learning	
Deep learning	<ul style="list-style-type: none"> A subset of machine learning. It involves using neural networks to learn complex patterns in that data.
The Input Layer	The dataset enters the network.
The Hidden Layer	<ul style="list-style-type: none"> The network is trying to find the patterns in the dataset. Also called neurons like the human brain.
The Output Layer	It represents the result of the network.

Unit 1 Lesson 2 Learn Tasks

Task Level	Obj Domain	Obj Description	Lesson Topic	Assessment Type	Assessment Details	Answer Key
1			Artificial Intelligence Definition	Multiple Choice	<p>Artificial Intelligence is a combination of a few fields. Select those fields from the options below.</p> <ul style="list-style-type: none"> • Deep learning • Computer science • Mathematics • Physics • Statistics 	<ul style="list-style-type: none"> • Deep learning • Computer science (correct) • Mathematics (correct) • Physics • Statistics (correct)
1			History of Artificial Intelligence	True/False	<p>In the 1980s, AI studies were active and were known as the "AI spring".</p>	<p>True</p> <p>False (correct)</p>
1			Types of Artificial Intelligence	Drag the Words	<p>Drag the correct term to match the descriptions.</p> <p>*_*: Type of AI that has the ability to solve a wide range of problems, much like a human mind.</p> <p>*_*: Type of AI that has the potential to surpass human intelligence in multiple tasks, such as decision-making and problem-solving.</p> <p>*_*: Type of AI designed to perform a single task exceptionally well, such as recommendation systems on streaming websites.</p> <ul style="list-style-type: none"> • Narrow AI • General AI • Strong AI 	<p>*General AI* (correct): Type of AI that has the ability to solve a wide range of problems, much like a human mind.</p> <p>*Strong AI* (correct): Type of AI that has the potential to surpass human intelligence in multiple tasks, such as decision-making and problem-solving.</p> <p>*Narrow AI* (correct): Type of AI designed to perform a single task exceptionally well, such as recommendation systems on streaming websites.</p>
1			Machine Learning Definition	True/False	<p>Machine Learning is a sub-category of Artificial Intelligence.</p>	<p>True (correct)</p> <p>False</p>

Task Level	Obj Domain	Obj Description	Lesson Topic	Assessment Type	Assessment Details	Answer Key												
1			Types of Machine Learning	Multiple Choice	<p>Which of the following is a type of machine learning that involves training a model through feedback, rather than through labeled data?</p> <ul style="list-style-type: none"> Supervised learning Unsupervised learning Reinforcement learning (correct) 	<ul style="list-style-type: none"> Supervised learning Unsupervised learning Reinforcement learning (correct) 												
1			Advantages and Disadvantages of AI and ML	Drag and Drop	<p>Drag the following descriptions into the Advantages or Disadvantages of AI and ML.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Advantages</th> <th>Disadvantages</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table> <ul style="list-style-type: none"> Technical limitation Efficiency Data quality and quantity Cost-saving 	Advantages	Disadvantages					<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Advantages</th> <th>Disadvantages</th> </tr> </thead> <tbody> <tr> <td>Efficiency (correct)</td> <td>Technical limitation (correct)</td> </tr> <tr> <td>Cost-saving (correct)</td> <td>Data quality and quantity (correct)</td> </tr> </tbody> </table>	Advantages	Disadvantages	Efficiency (correct)	Technical limitation (correct)	Cost-saving (correct)	Data quality and quantity (correct)
Advantages	Disadvantages																	
Advantages	Disadvantages																	
Efficiency (correct)	Technical limitation (correct)																	
Cost-saving (correct)	Data quality and quantity (correct)																	
1			Data science	Multiple Choice	<p>The study field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from data is called:</p> <ul style="list-style-type: none"> Machine learning Artificial Intelligence Data science (correct) Deep learning 	<ul style="list-style-type: none"> Machine learning Artificial Intelligence Data science (correct) Deep learning 												

Unit 1 Lesson 2 Practice Questions

Assessment Type	Assessment Details	Answer Key
Multiple Choice	You want to build a system to perform a single task. Which AI type will you choose? <ul style="list-style-type: none"> • General AI • Narrow AI • Self-Aware • Strong AI 	<ul style="list-style-type: none"> • General AI • Narrow AI (correct) • Self-Aware • Strong AI
True/False	AI systems with limited memory use previous experiences to make future decisions.	<p>True (correct)</p> <p>False</p>
Multiple Choice	You want to teach a robot to have the knowledge of where the doors in the house are by using a reward system. Which type of machine learning do you choose? <ul style="list-style-type: none"> • Supervised learning • Unsupervised learning • Reinforcement learning 	<ul style="list-style-type: none"> • Supervised learning • Unsupervised learning • Reinforcement learning (correct)
True/False	Machine learning is the use of data to make informed decisions, while AI refers to building computer systems that can perform tasks that require human intelligence.	<p>True</p> <p>False (correct)</p>
Fill in the Blanks	Fill in the blanks with the correct word. *_* and *_* are advantages of artificial intelligence. *_* is a sub-category of artificial intelligence. <ul style="list-style-type: none"> • Efficiency • Machine learning • Cost-saving • Being cost 	<p>*Efficiency/cost-saving* (correct) and *cost-saving/efficiency* (correct) are advantages of artificial intelligence.</p> <p>*Machine learning* (correct) is a sub-category of artificial intelligence.</p>

Unit 1 Lesson 2 Practice Exercises

Level	Exercise Number	Assessment Details	Answer Key			File Name									
1	1	<p>Drag and drop the following features to sort them under AI, Machine learning or data science:</p> <table border="1" data-bbox="328 537 878 774"> <thead> <tr> <th data-bbox="328 537 513 640">AI</th> <th data-bbox="513 537 696 640">Machine Learning</th> <th data-bbox="696 537 878 640">Data Science</th> </tr> </thead> <tbody> <tr> <td data-bbox="328 640 513 705"></td> <td data-bbox="513 640 696 705"></td> <td data-bbox="696 640 878 705"></td> </tr> <tr> <td data-bbox="328 705 513 774"></td> <td data-bbox="513 705 696 774"></td> <td data-bbox="696 705 878 774"></td> </tr> </tbody> </table> <ul data-bbox="375 842 857 1276" style="list-style-type: none"> • Reactive machines and self-ware are two of its types based on functionalities • Its types are supervised and unsupervised learning • It helps us to convert data into information, information into knowledge, and knowledge into insights • It was mentioned for the first time by the computer scientist McCarthy 	AI	Machine Learning	Data Science							<p>AI</p> <p>*Reactive machines and self-ware are two of its types based on functionalities* (correct)</p>	<p>Machine Learning</p> <p>Its types are supervised and unsupervised learning (correct)</p>	<p>Data Science</p> <p>It helps us to convert data into information, information into knowledge, and knowledge into insights (correct)</p>	
AI	Machine Learning	Data Science													
			<p>It was mentioned for the first time by the computer scientist McCarthy (correct)</p>												

Sample