1. What is Artificial Intelligence (AI)?

A branch of computer science focused on building systems that reason, learn, and act autonomously.

2. What is Machine Learning?

A subfield of AI that enables models to learn patterns from data without explicit programming.

Basics of AI and ML

3. What is Deep Learning?

Basics of AI and ML

A subset of ML that uses neural networks to learn complex patterns in large datasets.

4. What is Semi-Supervised Learning?

A learning method using a small amount of labeled data and a large amount of unlabeled data.

Basics of AI and ML

5. What is Generative AI?

Basics of AI and ML

A type of AI that creates new content like text, images, audio, or video based on patterns from training data.

6. What is the difference between supervised and unsupervised learning?

Supervised learning uses labeled data to predict outcomes; unsupervised learning finds patterns in unlabeled data.

Supervised vs Unsupervised

7. Example of Supervised Learning

Predicting tip amounts based on bill total and delivery type.

8. Example of Unsupervised Learning

Clustering employees based on income and tenure to find patterns.

Supervised vs Unsupervised

9. What is Error in Supervised ML?

The difference between the model's prediction and the actual output.

10. What is a Discriminative Model?

Generative vs Discriminative Models

A model that classifies or predicts labels for input data.

11. What is a Generative Model?

A model that generates new data based on a learned distribution of input data.

12. Discriminative Example

Classifies whether an image is a dog or not.

13. Generative Example

Generative vs Discriminative Models

Generates a new image of a dog from learned data.

14. When is it NOT Generative AI?

Generative vs Discriminative Models

When the output is a class, number, or probability (e.g. spam or not spam).

15. When IS it Generative AI?

Generative vs Discriminative Models

When the output is natural language, audio, images, or video.

16. What is the formula Y = f(X)?

It shows how output Y is a function of inputs X through a model or function f.

17. What is a Foundation Model?

A large AI model trained on vast data and adaptable to many tasks.

18. What is a Prompt?

Generative AI Fundamentals

A text input used to guide and control a model's output.

19. What is Prompt Design?

Generative AI Fundamentals

The practice of crafting prompts that elicit desired outputs from a GenAI model.

20. What are Hallucinations in AI?

Nonsensical or incorrect outputs generated due to poor data or insufficient context.

21. What are the main text-input model types?

Text-to-text, text-to-image, text-to-video, text-to-3D, text-to-task.

Model Types & Applications

22. Example of Text-to-Text

Model Types & Applications

Model translates language or rewrites text.

23. Example of Text-to-Image

Model Types & Applications

Model generates an image based on a short text prompt.

24. Example of Text-to-Video

Model Types & Applications

Model creates a video sequence from a sentence or script.

25. Example of Text-to-3D

Model Types & Applications

Model produces a 3D object from a textual description.

26. Example of Text-to-Task

Model Types & Applications

Model performs a task like navigating a UI or answering a question from text.

27. What is Gemini?

Google Cloud & Gemini

Google's multimodal AI model that processes text, images, audio, and code.

28. What is Vertex AI Studio?

A tool to explore, fine-tune, and deploy GenAI models on Google Cloud.

Google Cloud & Gemini

29. What is Vertex AI Agent Builder?

A tool to build chatbots, search tools, and digital assistants with minimal or no code.

30. How does GenAI help developers?

Assists with debugging, translating code, writing SQL, and generating documentation.

31. What is the Model Garden?

Google Cloud & Gemini

A collection of foundation models available via Google Cloud's Vertex AI platform.