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Time taken	5 mins 51 secs
Marks	18.00/20.00
Grade	90.00 out of 100.00

Question 1

Complete

Mark 0.00 out of 1.00

Claude models are designed by Anthropic with a focus on:

- a. Code generation only
- b. Safety, helpfulness, and harmlessness
- c. Vision-language learning
- d. Reinforcement learning optimization

Question 2

Complete

Mark 1.00 out of 1.00

GitHub Copilot integrates most deeply with which IDE?

- a. PyCharm
- b. Eclipse
- c. VS Code
- d. IntelliJ

Question 3

Complete

Mark 1.00 out of 1.00

GitHub Copilot is primarily powered by which model?

- a. Codex
- b. GPT-3.5
- c. Claude Instant
- d. Llama 2

Question 4

Complete

Mark 1.00 out of 1.00

In neural networks, ReLU activation is preferred over Sigmoid because:

- a. It produces binary output
- b. It uses softmax normalization
- c. It's linear and always differentiable
- d. It's nonlinear and avoids vanishing gradients

Question 5

Complete

Mark 1.00 out of 1.00

The architecture behind GPT and Claude is based on:

- a. Autoencoders
- b. Transformers
- c. RNNs
- d. CNNs

Question 6

Complete

Mark 1.00 out of 1.00

The gradient descent algorithm minimizes which function?

- a. Regularization term
- b. Learning rate
- c. Cost or loss function
- d. Activation function

Question 7

Complete

Mark 1.00 out of 1.00

What distinguishes OpenAI GPT models from Anthropic Claude?

- a. Claude emphasizes constitutional AI for safer responses
- b. GPTs use diffusion models
- c. Claude is rule-based
- d. GPTs use smaller context windows

Question 8

Complete

Mark 1.00 out of 1.00

What does the term embedding refer to in modern AI?

- a. Creating new hidden layers
- b. Representing words or data as continuous numeric vectors
- c. Compressing datasets
- d. Storing models in memory

Question 9

Complete

Mark 1.00 out of 1.00

What is a system prompt in LLM usage (like OpenAI's API)?

- a. The initial instruction defining model behavior
- b. Batch loader
- c. A shell command for API setup
- d. Token encoder

Question 10

Complete

Mark 1.00 out of 1.00

What is overfitting in ML?

- a. When the model fits unseen data better than training data
- b. When model training takes too long
- c. When the model memorizes training data and fails to generalize
- d. When there are too many features in the dataset

Question 11

Complete

Mark 1.00 out of 1.00

What is the role of tokenization in LLMs?

- a. Splitting text into smaller subunits for processing
- b. Generating embeddings
- c. Encrypting data
- d. Reducing overfitting

Question 12

Complete

Mark 1.00 out of 1.00

What is transfer learning?

- a. Transferring models between GPUs
- b. Using a pre-trained model for a new but related task
- c. Re-training from scratch using same data
- d. Sharing weights between layers

Question 13

Complete

Mark 1.00 out of 1.00

Which fine-tuning technique aligns LLM responses with human preferences?

- a. Regularization
- b. Unsupervised pretraining
- c. RLHF (Reinforcement Learning from Human Feedback)
- d. Transfer learning

Question 14

Complete

Mark 1.00 out of 1.00

Which of the following best describes "context window" in an LLM?

- a. Amount of tokens model can process at once
- b. Number of layers in model
- c. GPU memory used
- d. Batch size

Question 15

Complete

Mark 1.00 out of 1.00

Which of the following best describes the difference between AI and ML?

- a. ML is broader than AI
- b. Both are identical fields
- c. ML is a subset of AI
- d. AI is a subset of ML

Question 16

Complete

Mark 0.00 out of 1.00

Which of the following is NOT a likely limitation of AI coding assistants like Copilot?

- a. Security vulnerability propagation
- b. Guaranteed correctness
- c. Dependency on context quality
- d. Code suggestion errors

Question 17

Complete

Mark 1.00 out of 1.00

Which of the following models is primarily unsupervised?

- a. Decision Trees
- b. Logistic Regression
- c. K-Means Clustering
- d. Random Forest

Question 18

Complete

Mark 1.00 out of 1.00

Which of the following OpenAI models is multimodal (supports image and text)?

- a. GPT-3
- b. Codex
- c. DALL-E 2
- d. GPT-4o

Question 19

Complete

Mark 1.00 out of 1.00

Which of the following techniques enables LLMs to attend to different words contextually?

- a. Reinforcement learning
- b. Recurrent feedback
- c. Self-attention
- d. Convolution

Question 20

Complete

Mark 1.00 out of 1.00

Why do LLMs often hallucinate?

- a. They lack mathematical grounding
- b. They have insufficient training data
- c. They predict likely text without factual verification
- d. They overfit on large datasets