Computational Intelligence

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Section: A

Assignment 01

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Question:

Distinguish Advanced AI from Basic AI Systems

Answer:

Aspect	Advance AI	Basic AI
Capabilities	Handles complex tasks, adapts, and learns from experience	Follows pre-programmed rules without adaptation

Learning Ability	Learns from new data, identifies patterns, and improves over time	Lacks the ability to learn; operates on static rules
Scope	Can handle multiple tasks across different domains	Limited to specific, narrow tasks within a single domain
Adaptability and Decision-Making	Makes decisions based on real-time data; adapts to new situations	Decisions are fixed, based on predefined conditions
Data Processing	Can process large amounts of data simultaneously	Handles small sets of data with limited analysis
Human-Like Interaction	Provides more natural, human-like interactions (e.g., understanding context)	Provides limited interaction, often rule-based responses
Problem Solving	Capable of creative problem-solving and handling unexpected challenges	Only solves specific, pre-defined problems
Evolution Over Time	Continuously improves through learning and feedback	Remains static unless manually reprogrammed
Flexibility	Can adjust to new tasks and environments	Works strictly within the framework it was programmed for
Example	AI-powered personal assistants, self-driving cars	Simple chatbots, rule-based software