Artificial Intelligence

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1. Recall facts and concepts related to Artificial Intelligence, including the history, background, and various applications of AI.

2. Explain the Turing Test and its significance in evaluating artificial intelligence systems.

3. Identify and describe the components and characteristics of intelligent agents, as well as different rational agent approaches in AI.

4. Apply problem-solving and searching techniques such as breadth-first search, depth-first search, hill climbing, and heuristics search techniques to solve AI problems.

5. Analyze game playing strategies using minmax and game trees, as well as refining minmax and implementing Alpha-Beta pruning for optimization.

6. Evaluate knowledge representation methods including First Order Predicate Logic, Resolution Principle, Semantic Nets, Conceptual Dependencies, Frames, Production Rules, and Conceptual Graphs.

7. Assess techniques for dealing with uncertainty and inconsistencies in AI systems, such as Truth Maintenance System, Default Reasoning, Probabilistic Reasoning, Bayesian Probabilistic inference, and Possible World Representations.

8. Examine the ethical and social implications of AI, including issues related to bias and fairness, privacy and data protection concerns, impact on employment and social inequality, as well as ethical guidelines and responsible AI practices.