Question Content

Who is the inventor of Artificial Intelligence?
Which of the following is the branch of Artificial Intelligence?

Which of the following is an application of Artificial Intelligence?

In how many categories process of Artificial Intelligence is categorized?
Based on which of the following parameter Artificial Intelligence is categorized?
Which of the following is a component of Artificial Intelligence?

What is the function of an Artificial Intelligence "Agent"?
Which of the following is not a type of Artificial Intelligence agent?

The total number of logical symbols in AI are _____
Which of the following are the approaches to Artificial Intelligence?

Which of the following is an advantage of artificial intelligence?
Artificial Intelligence has evolved extremely in all the fields except for _____

What is an AI 'agent'?
What is the name of Artificial Intelligence which allows machines to handle vague information with a deftness that mimics human intuition?
Which of the following produces hypotheses that are easy to read for humans?
What is the total number of quantification available in artificial intelligence?

What is Weak AI?
External actions of the agent is selected by _____
An Artificial Neural Network Is based on?
The Face Recognition system is based on?
A completely automated chess engine (Learn from previous games) is based on?
A basic line following robot is based on _____
Which term is used for describing the judgmental or commonsense part of problem solving?

Which stage of the manufacturing process has been described as “the mapping of function onto form”?

What was originally called the “imitation game” by its creator?

Decision support programs are designed to help managers make _____

Ambiguity may be caused by _____

What are the two subfields of Natural language processing?

High-resolution, bit-mapped displays are useful for displaying ____

Which of the following have people traditionally done better than computers?

An Artificial Intelligence technique that allows computers to understand associations and relationships between objects and events is called _____

What is the name of the computer program that simulates the thought processes of human beings?

What is the name of the computer program that contains the distilled knowledge of an expert?

Claude Shannon described the operation of electronic switching circuits with a system of mathematical logic called _____

What is the term used for describing the judgmental or commonsense part of problem solving?

Decision support programs are designed to help managers make _____

Programming a robot by physically moving it through the trajectory you want it to follow is called _____

An algorithm is complete if _____

Which is true regarding BFS (Breadth First Search)?

What is a heuristic function?

The traveling salesman problem involves n cities with paths connecting the cities. The time taken for traversing through all the cities, without knowing in advance the length of a minimum tour, is

What is the problem space of means-end analysis?

An algorithm A is admissible if _____

Knowledge may be I. Declarative. II. Procedural. III. Non-procedural.

Which functions are used as preferences over state history?

Specify the agent architecture name that is used to capture all kinds of actions.
Which agent enables the deliberation about the computational entities and actions?
What can operate over the joint state space?
Agents behavior can be best described by _____

What is rational at any given time depends on?

What is state space?
A search algorithm takes _____ as an input and returns _____ as an output.
A problem in a search space is defined by one of these state.
The Set of actions for a problem in a state space is formulated by a _____
The process of removing detail from a given state representation is called ____

A problem solving approach works well for _____
The _____ is a touring problem in which each city must be visited exactly once. The aim is to find the shortest tour.
A production rule consists of _____
Which is the best way to go for Game playing problem?
Which search strategy is also called as blind search?
Which search is implemented with an empty first-in-first-out queue?
How many parts does a problem consists of?
Which algorithm is used to solve any kind of problem?
Strategies that know whether one non-goal state is “more promising” than another are called _____
uniform-cost search expands the node n with the _____
For general graph, how one can get rid of repeated states?
Which search uses the problem specific knowledge beyond the definition of the problem?
Which function will select the lowest expansion node at first for evaluation?
Which search is complete and optimal when h(n) is consistent?
Which search method will expand the node that is closest to the goal?

A heuristic is a way of trying _____

Best-First search is a type of informed search, which uses _____ to choose the best next node for expansion.
Best-First search can be implemented using the following data structure.

Heuristic function h(n) is _____
Greedy search strategy chooses the node for expansion in _____

What is the evaluation function in A* approach?
In many problems the path to goal is irrelevant, this class of problems can be solved using _____
_____ Is an algorithm, a loop that continually moves in the direction of increasing value – that is uphill.
When will Hill-Climbing algorithm terminate?
Hill climbing sometimes called _____ because it grabs a good neighbor state without thinking ahead about where to go next.

What are the two main features of Genetic Algorithm?
Searching using query on Internet is, use of _____ type of agent.
_____ are mathematical problems defined as a set of objects whose state must satisfy a number of constraints or limitations.
What among the following constitutes to the incremental formulation of CSP?
The term _____ is used for a depth-first search that chooses values for one variable at a time and returns when a variable has no legal values left to assign.
To overcome the need to backtrack in constraint satisfaction problem can be eliminated by _____
Constraint satisfaction problems on finite domains are typically solved using a form of _____
Solving a constraint satisfaction problem on a finite domain is an/a _____ problem with respect to the domain size.
_____ is/are useful when the original formulation of a problem is altered in some way, typically because the set of constraints to consider evolves because of the environment.
When do we call the states are safely explored?
General games involves _____

Adversarial search problems uses _____
Zero sum game has to be a _____ game

The initial state and the legal moves for each side define the _____ for the game.
What is the complexity of minimax algorithm?
Which is the most straightforward approach for planning algorithm?
What are taken into account of state-space search?
How many ways are available to solve the state-space search?
What is the other name for forward state-space search?
How many states are available in state-space search?
What is the other name of the backward state-space search?
What will happen if a predecessor description is generated that is satisfied by the initial state of the planning problem?
Which approach is to pretend that a pure divide and conquer algorithm will work?
To which depth does the alpha-beta pruning can be applied?
Which value is assigned to alpha and beta in the alpha-beta pruning?
Which function is used to calculate the feasibility of whole game tree?
Translate the following statement into FOL.: "For every a, if a is a philosopher, then a is a scholar"
A _____ is used to demonstrate, on a purely syntactic basis, that one formula is a logical consequence of another formula.
First Order Logic is also known as _____
The adjective "first-order" distinguishes first-order logic from _____ in which there are predicates having predicates or functions as arguments, or in which one or both of predicate quantifiers or function quantifiers are permitted.
Which is created by using single propositional symbol?
Which is used to construct the complex sentences?
How many proposition symbols are there in artificial intelligence?
Which is used to compute the truth of any sentence?
Which form is called as a conjunction of disjunction of literals?
What can be viewed as a single lateral of disjunction?

Which is a refutation complete inference procedure for propositional logic?
What kind of clauses are available in Conjunctive Normal Form
What is the condition of literals in variables?
Which sentence will be unsatisfiable if the CNF sentence is unsatisfiable?
When the resolution is called as refutation-complete?
Which condition is used to cease the growth of forward chaining?
Which closely resembles propositional definite clause?

Which knowledge base is called as fixed point?
Which will solve the conjuncts of the rule so that the total cost is minimized?
Which is mainly used for automated reasoning?
What is used in backward chaining algorithm?
Which problem can frequently occur in backward chaining algorithm?
Knowledge and reasoning also play a crucial role in dealing with _____ environment.

Treatment chosen by doctor for a patient for a disease is based on _____

A) Knowledge base (KB) is consists of set of statements.
B) Inference is deriving a new sentence from the KB.
Choose the correct option.
Wumpus World is a classic problem, best example of ____
'α |= β '(to mean that the sentence α entails the sentence β) if and only if, in every model in which α is _____ β is also _____
Which is not a property of representation of knowledge?
Which is not Familiar Connectives in First Order Logic?

Inference algorithm is complete only if _____
What among the following could the universal instantiation of _____
For all x King(x) ^ Greedy(x) => Evil(x)
Lifted inference rules require finding substitutions that make different logical expressions looks identical.

What are the two basic types of inferences?
Which among the following could the Existential instantiation of ∃x Crown(x) ^ OnHead(x, Johnny)?
Translate the following statement into FOL.
"For every a, if a is a PhD student, then a has a master degree"
Instead of representing knowledge in a relatively declarative, static way (as a bunch of things that are true), rule-based system represent knowledge in terms of_____ that tell you what you should do or what you could conclude in different situations.
Forward chaining systems are _____ where as backward chaining systems are _____
A Horn clause is a clause with _____ positive literal.

_____ trees can be used to infer in Horn clause systems.
Autonomous Question/Answering systems are _____
What are the main components of the expert systems?
What is the frame?
Which of the following elements constitutes the frame structure?
There exists two way to infer using semantic networks in which knowledge is represented as Frames.

Correct

John McCarthy

Machine Learning

Language understanding and problem-solving (Text analytics and NLP)

categorized into 3 categories

Based on capabilities and functionally

Learning

Mapping of precept sequence to an action

Unity-based AI agent

There are 5 logical symbols

All of the mentioned

All of the above

All of the mentioned

All of the mentioned

Fuzzy logic

ILP

2

the study of mental faculties using mental models implemented on a computer

Performance

Cognitive Artificial Intelligence approach

Applied Artificial Intelligence approach

Strong Artificial Intelligence approach

Weak Artificial Intelligence approach

Heuristic

Design

The Turing Test

business decisions

all of the mentioned
algorithmic and heuristic
more characters

resolving ambiguity

relative symbolism

Expert system

Expert system

Neural networking

Heuristic

business decisions

continuous-path control

It terminates with a solution when one exists
The entire tree so far been generated must be stored in
BFS
A function that maps from problem state descriptions to
measures of desirability

O(n!)

An initial state and one or more goal states

It is guaranteed to return an optimal solution when one
exists
Both (I) and (II)
Reward

Hybrid

Reflective

Both Decision-making & Learning algorithm
Agent function

All of the mentioned

Representing your problem with variable and parameter

Problem, solution

Initial state
Successor function, which takes current action and
returns next immediate state

Abstraction

Mars Hover (Robot Navigation)

Travelling Salesman problem

Set of Rule & sequence of steps
Heuristic approach (Some knowledge is stored)
Uninformed search
Breadth-first search
4
Tree algorithm

Informed & Heuristic Search
Lowest path cost
By maintaining a list of visited vertices

Informed search

Best-first search
A* search
Greedy best-first search

All of the mentioned

Evaluation function returning lowest evaluation
Priority Queue

Estimated cost of cheapest path from root to goal node
The one closest to the goal node

Heuristic function

Local Search Techniques

Hill-Climbing
No neighbor has higher value

Greedy local search

Fitness function & Crossover techniques
Goal Based & Online agent

Constraints Satisfaction Problems

All of the mentioned

Backtrack search

Forward Searching

All of the mentioned

NP complete

Dynamic CSPs
A goal state is reachable from every state
Only Single-agent and Multi-agent

Competitive Environment
Multiplayer

Game Tree
Same as of DFS
State-space search
Both Preconditions & Effects
2
Progression planning
4
Regression planning

Termination

Subgoal independence
Any depth
Both Alpha = max & Beta = min
Evaluation function

∀ a philosopher(a) scholar(a)

Deductive Systems
All of the mentioned

Higher Order Logic
Atomic sentences
Logical connectives
2
Semantics of propositional logic
Conjunctive normal form
Unit clause

Propositional resolution
Disjunction of literals
Universally quantified
Original statement
Sentence is unsatisfiable
No further inference
First-order definite clauses

First-order definite clause are similar to propositional
forward chaining

Conjunct ordering
Logic programming
Substitutes matching the query
Both Repeated states & Incompleteness

Partially Observable

Current symptoms plus some knowledge from the
textbooks plus experience

A is true, B is true
Reasoning with Knowledge

True, true
Representational Verification
not
It can derive any sentence that is an entailed version & It
is truth preserving

All of the mentioned

Unification
Reduction to propositional logic, Manipulate rules
directly

Crown(John) ^ OnHead(John, Jonny)

∀ a PhD(a) -> Master(a)

A bunch of rules

Data-driven, goal-driven
At most one

And/Or Trees
All of the mentioned
Inference Engine & Knowledge Base
A way of representing knowledge
Facts or Data

TRUE

Option 1

Geoffrey Hinton

Machine Learning

It helps to exploit vulnerabilities to secure the firm

categorized into 5 categories

Based on functionally only

Learning

Mapping of goal sequence to an action

Learning AI agent

There are 3 logical symbols

Applied approach

Reduces the time taken to solve the problem

Web mining

Takes input from the surroundings and uses its intelligence and performs the desired operations

Human intelligence

Machine Learning

1

the study of mental faculties using mental models implemented on a computer

Perceive

Strong Artificial Intelligence approach

Strong Artificial Intelligence approach

Strong Artificial Intelligence approach

Strong Artificial Intelligence approach

Heuristic

Design

The Turing Test

budget projections

syntactic ambiguity
symbolic and numeric
clearer characters

recognizing relative importance

heuristic processing

Human logic

Artificial intelligence

LISP

Heuristic

budget projections

contact sensing control

It terminates with a solution when one exists

BFS will get trapped exploring a single path

A function to solve mathematical problem

O(n)

An initial state and one or more goal states

It is not guaranteed to return an optimal solution when one exists
Only (I)
Award

Complex

Hybrid

Decision-making algorithm
Perception sequence

The performance measure that defines the criterion of success

The whole problem

Input, output

Initial state

Intermediate states

Extraction

8-Puzzle problem

Finding shortest path between a source and a destination

A set of Rule
Linear approach
Uninformed search
Depth-first search
1
Breadth-first algorithm

Informed & Unformed Search

Lowest path cost
By maintaining a list of visited vertices

Informed search

Greedy best-first search

A* search
Best-first search

To discover something or an idea embedded in a program

Evaluation function returning lowest evaluation

Queue

Lowest path cost

Shallowest

Heuristic function

Informed Search Techniques

Up-Hill Search

Stopping criterion met

Needy local search

Fitness function & Crossover techniques

Offline agent

Constraints Satisfaction Problems

Path cost

Forward search

Forward Searching

Search Algorithms

P complete

Static CSPs

A goal state is unreachable from any state
Single-agent

Competitive Environment

Single player

Search Tree

Same as of DFS
Best-first search
Postconditions
1
Progression planning
1
Regression planning

Success

Goal independence

10 states
Alpha = max
Evaluation function

∀ a philosopher(a) scholar(a)

Deductive Systems

First Order Predicate Calculus

Representational Verification

Complex sentences
Symbols
1
Semantics of propositional logic
Conjunctive normal form
Multiple clause

Clauses

Disjunction of literals
Existentially quantified
Search statement
Sentence is satisfiable
Atomic sentences
Resolution

First-order definite clause are similar to propositional forward chaining

Constraint variable

Backward chaining
Conjuncts
Repeated states

Completely Observable

Only current symptoms

A is true, B is true

Single player Game

True, true

Representational Verification
and

It can derive any sentence

King(John) ^ Greedy(John) => Evil(John)

Existential Instantiation

Reduction to propositional logic, Manipulate rules directly

Crown(John) ^ OnHead(John, Jonny)

∀ a PhD(a) -> Master(a)

Raw Text

Goal-driven, goal-driven

At least one

Min/Max Tree
Expert Systems
Inference Engine
A way of representing knowledge
Facts or Data

Intersection Search

Option 2

Andrew Ng

Cyber forensics

Language understanding and problem-solving (Text analytics and NLP)

processes are categorized based on the input provided

Based on capabilities only

Training

Mapping of precept sequence to an action

Goal-based AI agent

There are 5 logical symbols

Strong approach

Helps in providing security

Construction of plans in real time dynamic systems

An embedded program controlling line following robot

Boolean logic

ILP

2

the embodiment of human intellectual capabilities within a computer

Performance

Weak Artificial Intelligence approach

Weak Artificial Intelligence approach

Weak Artificial Intelligence approach

Weak Artificial Intelligence approach

Critical

Distribution

LISP

business decisions

multiple word meanings
time and motion
graphics

resolving ambiguity

cognitive science

Expert reason

Expert system

XLISP

Critical

visual presentations

continuous-path control

It starts with a solution
The entire tree so far been generated must be stored in
BFS
A function which takes parameters of type string and
returns an integer value

O(n2)

One or more initial states and one goal state

It is guaranteed to return an optimal solution when
one exists
Only (II)
Reward

Relational

Reflective

Learning algorithm
Agent function

The agent’s prior knowledge of the environment

Your Definition to a problem

Problem, solution

Last state

Initial state

Abstraction

8-queen problem

Travelling Salesman problem

A sequence of steps
Heuristic approach
Informed search
Breadth-first search
2
Tree algorithm

Unformed Search

Heuristic cost
By maintaining a list of traversed edges

Depth-first search

Best-first search

Best-first search
Greedy best-first search
To search and measure how far a node in a search tree seems to be from a goal

Evaluation function returning highest evaluation

Stack

Cheapest path from root to goal node

Deepest

Path cost from start node to current node

Uninformed Search Techniques

Hill-Climbing

Global Min/Max is achieved

Heuristic local search

Crossover techniques & Random mutation

Online agent

Uninformed Search Problems

Goal cost

Backtrack search

Constraint Propagation

Heuristic Search Algorithms

NP complete

Dynamic CSPs

A goal state is denied access
Multi-agent

Cooperative Environment

Two player

Game Tree

Space – bm and time – bm
State-space search
Preconditions
2
Regression planning
2
Progression planning

Error

Subgoal independence

8 States
Beta = min
Transposition

∃ a philosopher(a) scholar(a)

Inductive Systems

Quantification Theory

Representational Adequacy

Atomic sentences
Connectives
2
Alpha-beta pruning
Disjunctive normal form
Combine clause

Variables

Disjunction of variables
Universally quantified
Reading statement
Sentence is unsatisfiable
Complex sentences
Inference

First-order definite clause are mismatch to propositional forward chaining

Conjunct ordering

Forward chaining
Substitution
Incompleteness

Partially Observable

Current symptoms plus some knowledge from the textbooks

A is false, B is false

Two player Game

True, false

Representational Adequacy
iff

It can derive any sentence that is an entailed version

King(y) ^ Greedy(y) => Evil(y)

Universal Instantiation

Reduction to propositional logic, Apply modus ponen

Crown(y) ^ OnHead(y, y, x)

∃ a PhD(a) -> Master(a)

A bunch of rules

Goal-driven, data-driven

At most one

And/Or Trees
Rule Based Expert Systems
Knowledge Base
Data Structure
Procedures and default values

Inheritance Search

Option 3

Jürgen Schmidhuber

Full-Stack Developer

Easy to create a website

categorized into 3 categories

Based on capabilities and functionally

Designing

Work without the direct interference of the people

Simple reflex AI agent

Number of logical symbols are based on the input

Weak approach

Have the ability to think hence makes the work easier

Understanding natural language robustly

Perceives its environment through sensors and acting upon that environment through actuators

Functional logic

First-order logic

3

a set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans

Learning

Cognitive Artificial Intelligence approach

Cognitive Artificial Intelligence approach

Cognitive Artificial Intelligence approach

Cognitive Artificial Intelligence approach

Value based

Project management

The Logic Theorist

vacation schedules

unclear antecedents
algorithmic and heuristic
more characters

finding similarities

relative symbolism

Expert system

Database management system

Boolean algebra

Value based

business decisions

robot vision control

It does not terminate with a solution
BFS is not guaranteed to find a solution if exists

A function whose return type is nothing

O(n!)

One or more initial states and one or more goal state
It returns more solutions, but not an optimal one
Only (III)
Explicit

Hybrid

Relational

Complex algorithm
Sensors and Actuators

The actions that the agent can perform

Problem you design

Solution, problem

Intermediate state
Successor function, which takes current action and returns next immediate state

Information Retrieval

Finding a optimal path from a given source to a destination

Map coloring problem

Set of Rule & sequence of steps
Random approach
Simple reflex search
Bidirectional search
3
Bidirectional search algorithm

Heuristic & Unformed Search

Highest path cost
By maintaining a list of non-visited vertices

Breadth-first search

Depth-first search

Depth-first search
A* search
To compare two nodes in a search tree to see if one is better than another

Evaluation function returning lowest & highest evaluation
Priority Queue
Estimated cost of cheapest path from root to goal node
The one closest to the goal node
Path cost from start node to current node + Heuristic cost

Local Search Techniques

Hill algorithm

No neighbor has higher value

Greedy local search

Individuals among the population & Random mutation
Both Offline & Online agent

Local Search Problems

Successor function

Hill algorithm

Backtrack after a forward search

Greedy Search Algorithms

NP hard

Flexible CSPs

A goal state is reachable from every state
Neither Single-agent nor Multi-agent
Neither Competitive nor Cooperative
Environment
Multiplayer

State Space Search

Time – bm and space – bm
Depth-first search
Effects
3
Test planning
3
State planning

Compilation

Both Goal & Subgoal independence

6 States
Beta = max
Alpha-beta pruning

Both

Reasoning with Knowledge Based Systems

Lower Order Calculus

Higher Order Logic

Composition sentences
Logical connectives
3
First-order logic
Normal form
Unit clause

Propositional resolution

Conjunction of literals
Quantified
Replaced statement
Sentence remains the same
No further inference
Conjunction

All of the mentioned

Data complexity

Logic programming
Composition of substitution
Complexity

Neither Completely nor Partially Observable

Current symptoms plus some knowledge from
the textbooks plus experience

A is true, B is false

Reasoning with Knowledge

False, true

Inferential Adequacy
or

It is truth preserving

King(Richard) ^ Greedy(Richard) =>
Evil(Richard)

Unification

Apply modus ponen, Manipulate rules directly

Crown(x) ^ OnHead(x, Jonny)

A is true, B is true

Summarized Text

Data-driven, goal-driven

None

Minimum Spanning Trees
Decision Tree Based Systems
Inference Engine & Knowledge Base
Data Type
Frame names

TRUE

Option 4

John McCarthy
Network Design

It helps to deploy applications on the cloud

process is not categorized

It is not categorized

Puzzling

Mapping of environment sequence to an action

Unity-based AI agent

Logical symbols are not used

All of the mentioned

All of the above

All of the mentioned

All of the mentioned

Fuzzy logic

Propositional logic

4

all of the mentioned

Actuator
Applied Artificial Intelligence approach
Applied Artificial Intelligence approach

Applied Artificial Intelligence approach

Applied Artificial Intelligence approach

Analytical

Field service

Cybernetics

visual presentations

all of the mentioned
understanding and generation
all of the mentioned

all of the mentioned

pattern matching

Personal information

Management information System

Neural networking

Analytical

vacation schedules

pick-and-place control

It has a loop

BFS is nothing but Binary First Search

A function that maps from problem state descriptions to measures of desirability

O(n/2)

One initial state and one goal state

It guarantees to return more optimal solutions

Both (I) and (II)
Implicit

Reflective

Complex

Both Decision-making & Learning algorithm
Environment in which agent is performing

All of the mentioned

Representing your problem with variable and parameter

Parameters, sequence of actions

All of the mentioned

None of the mentioned

Mining of data

Mars Hover (Robot Navigation)

Depth first search traversal on a given map represented as a graph
Arbitrary representation to problem
An Optimal approach
All of the mentioned
None of the mentioned
4
None of the mentioned

Informed & Heuristic Search

Average path cost
By maintaining a list of non-traversed edges

Uninformed search

None of the mentioned

Both Best-first & Depth-first search
None of the mentioned

All of the mentioned

None of them is applicable

Circular Queue

Average path cost

Minimum heuristic cost
Average of Path cost from start node to current node and Heuristic cost

Informed & Uninformed Search Techniques

Reverse-Down-Hill search

All of the mentioned

Optimal local search

Random mutation & Fitness function

Goal Based & Online agent

All of the mentioned

All of the mentioned

Reverse-Down-Hill search

Omitting the constraints and focusing only on goals

All of the mentioned

Domain dependent

None of the mentioned

None of the mentioned
Only Single-agent and Multi-agent

Only Competitive and Cooperative Environment

Three player

Forest

Same as BFS
Hill-climbing search
Both Preconditions & Effects
4
None of the mentioned
4
Test planning

Termination

None of the mentioned

Any depth
Both Alpha = max & Beta = min
All of the mentioned

None

Search Based Systems

All of the mentioned

Inferential Efficiency

None of the mentioned
Logical Symbols
4
Both Semantics of propositional logic & Alpha-beta pruning
All of the mentioned
None of the mentioned

Proposition

Conjunction of variables
None of the mentioned
Original statement
None of the mentioned
All of the mentioned
First-order definite clauses

None of the mentioned

All of the mentioned

Parallel programming
Composition of Conjuncts
Both Repeated states & Incompleteness

Only Completely and Partially Observable

All of the mentioned

A is false, B is true

Knowledge based Game

False, false

Inferential Efficiency
not
It can derive any sentence that is an entailed version & It is truth preserving

All of the mentioned

Modus Ponen

Convert every rule to Horn Clause, Reduction to propositional logic

None of the mentioned

A is false, B is false

Collection of various Texts

Data-driven, data-driven

All

Binary Search Trees
All of the mentioned
None of the mentioned
None of the mentioned
Frame reference in hierarchy

False