

Review Test Submission: Week02 Quiz AI Ch01-02

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| User | Keerthi Teja Konuri |
| Course | CS 6364.001 - Artificial Intelligence - F15 |
| Test | Week02 Quiz AI Ch01-02 |
| Started | 9/5/15 7:38 PM |
| Submitted | 9/5/15 8:05 PM |
| Due Date | 9/6/15 11:59 PM |
| Status | Completed |
| Attempt Score | 29 out of 29 points |
| Time Elapsed | 27 minutes out of 30 minutes |
| Results Displayed | All Answers, Submitted Answers, Correct Answers |

Question 1

15 out of 15 points

Matching. Select one best answer for who did what. The choice (answer) can be used more than one time.

Note: Minsky supervised a series of students who chose limited problems that appeared to require intelligence to solve. These limited domains became known as microworlds. The most famous microworld was the blocks world, which consists of a set of solid blocks placed on a tabletop (or more often, a simulation of a tabletop). A typical task in this world is to rearrange the blocks in a certain way, using a robot hand that can pick up one block at a time.

| Question | Correct Match | Selected Match |
|--|--|--|
| ___ (1959) constructed the Geometry Theorem Prover, which was able to prove theorems that many students of mathematics would find quite tricky. | <input checked="" type="checkbox"/> J. Herbert Gelernter | <input checked="" type="checkbox"/> J. Herbert Gelernter |
| Starting in 1952, ___ wrote a series of programs for checkers (draughts) that eventually teamed to play at a strong amateur level. | <input checked="" type="checkbox"/> D. Arthur Samuel | <input checked="" type="checkbox"/> D. Arthur Samuel |
| In MIT AI Lab Memo No. 1 (1958), ___ defined the high-level language Lisp, which was to become the dominant AI programming language for the next 30 years. | <input checked="" type="checkbox"/> C. John McCarthy | <input checked="" type="checkbox"/> C. John McCarthy |
| For access to scarce and expensive computing resources | <input checked="" type="checkbox"/> C. | <input checked="" type="checkbox"/> C. |

was also a serious problem. In response, ____ and others at MIT invented time sharing.

John McCarthy John McCarthy

____ published a paper entitled *Programs with Common Sense*, in which he described the Advice Taker, a hypothetical program that can be seen as the first complete AI system. The program was designed to use knowledge to search for solutions to problems. But unlike the others, it was to embody general knowledge of the world.

✓ C. John McCarthy
✓ C. John McCarthy

McCarthy and Minsky were at MIT and working on AI in the early days of AI, ____ stressed representation and reasoning in formal logic.

✓ C. John McCarthy
✓ C. John McCarthy

In 1963, McCarthy started the AI lab at Stanford. His plan to use logic to build the ultimate AI system was advanced by ____'s discovery in 1965 of the resolution method (a complete theorem-proving algorithm for first-order logic).

✓ F. J. A. Robinson
✓ F. J. A. Robinson

At Stanford, applications of logic included ____'s question-answering and planning systems (1969) and the Shakey robotics project at the Stanford Research Institute (SRI).

✓ N. Cordell Green
✓ N. Cordell Green

In microworlds, ____'s SAINT program (1963) was able to solve closed-form calculus integration problems typical of first-year college courses.

✓ K. James Slagle
✓ K. James Slagle

In microworlds, ____'s ANALOGY program (1968) solved geo-metric analogy problems that appear in IQ tests.

✓ A. Tom Evans
✓ A. Tom Evans

In microworlds, ____'s STUDENT program (1967) solved algebra story problems.

✓ B. Daniel Bobrow
✓ B. Daniel Bobrow

The blocks world was home to the vision project of David Huffman (1971), the vision and constraint-propagation work of ____ (1975)

✓ H. David Waltz
✓ H. David Waltz

The blocks world was home to the learning theory of ____ (1970).

✓ M. Patrick Winston
✓ M. Patrick Winston

The blocks world was home to the natural-language-understanding program of ____ (1972).

✓ I. Terry Winograd
✓ I. Terry Winograd

The blocks world was home to the planner of ____ (1974).

✓ L. Scott Fahlman
✓ L. Scott Fahlman

All Answer Choices

A. Tom Evans

B. Daniel Bobrow

C. John McCarthy

D. Arthur Samuel

E. Marvin Minsky

F. J. A. Robinson

G. David Huffman

H. David Waltz

I. Terry Winograd

J. Herbert Gelernter

K. James Slagle

L. Scott Fahlman

M. Patrick Winston

N. Cordell Green

Question 2

14 out of 14 points

Select the best matching (and most relevant) answer for each question or statement (according to Russell and Norvig).

| Question | Correct Match | Selected Match |
|--|---------------------------------|---------------------------------|
| Judea Perl (1988) Probabilistic Reasoning in Intelligent Systems led to a new acceptance of probability and decision theory in AI. | ✓ E. Bayesian Reasoning/Network | ✓ E. Bayesian Reasoning/Network |
| Dictionary definitions of ___ talk about “the capacity to acquire and apply knowledge” or “the faculty of thought and reason” or “the ability to comprehend and profit from experience.” | ✓ B. Intelligence | ✓ B. Intelligence |
| We define ___ as the study and construction of agent programs that perform well in a given environment, for a given agent architecture. | ✓ M. artificial intelligence | ✓ M. artificial intelligence |
| We define ___ as an entity that takes action in response to percepts from an environment. | ✓ A. an agent | ✓ A. an agent |
| We define ___ as the property of a system which does the “right thing” given what it knows. | ✓ J. rationality | ✓ J. rationality |
| We define ___ as the a process of deriving new sentences from old, such that the new sentences are necessarily true if | ✓ I. logical reasoning | ✓ I. logical reasoning |

the old ones are true.

In recent years, approaches based on ____ have come to dominate the area of speech recognition.

✓ N.
Hidden Markov
models (HMMs)

✓ N.
Hidden Markov
models (HMMs)

In the mid-1980s at least four different groups reinvented the ____ learning algorithm first found in 1969 by Bryson and Ho. The algorithm was applied to many learning problems in computer science and psychology, and the widespread dissemination of the results in the collection *Parallel Distributed Processing* (Rumelhart and McClelland, 1986) caused great excitement

✓ F.
back-propagation

✓ F.
back-propagation

IBM's ____ became the first computer program to defeat the world champion in a chess match when it bested Garry Kasparov by a score of 3.5 to 2.5 in an exhibition match (Goodman and Keene, 1997). Kasparov said that he felt a 'new kind of intelligence' across the board from him. *Newsweek* magazine described the match as "The brain's last stand." The value of IBM's stock increased by \$18 billion.

✓ H. DEEP BLUE

✓ H. DEEP BLUE

____ (Al-Chang *et al.*, 2004) plans the daily operations for NASA's Mars Exploration Rovers, and MEXAR2 (Cesta *et al.*, 2007) did mission planning—both logistics and science planning—for the European Space Agency's Mars Express mission in 2008.

✓ C. MAPGEN

✓ C. MAPGEN

The iRobot Corporation has sold over two million Roomba robotic vacuum cleaners for home use. The company also deploys the more rugged ____ to Iraq and Afghanistan, where it is used to handle hazardous materials, clear explosives, and identify the location of snipers.

✓ L. PackBot

✓ L. PackBot

A computer program automatically translates from Arabic to English,

✓ D.
Machine
Translation

✓ D.
Machine
Translation

allowing an English speaker to see the headline "Ardogan Confirms That Turkey Would Not Accept Any Pressure, Urging Them to Recognize Cyprus." The program uses a statistical model built from examples of Arabic-to-English translations and from examples of English text totaling two trillion words (Brants or al.: 2007). None of the computer scientists on the team speak Arabic, but they do understand statistics and machine learning algorithms

During the Persian Gulf crisis of 1991, U.S. forces deployed ____ (Cross and Walker, 1994), to do automated logistics planning and scheduling for transportation. This involved up to 50,000 vehicles, cargo, and people at a time, and had to account for starting points, destinations, routes, and conflict resolution among all parameters. The AI planning techniques generated in hours a plan that would have taken weeks with older methods. The Defense Advanced Research Project Agency (DARPA) stated that this single application more than paid back DARPA's 30-year investment in AI.

✔ K.
Dynamic Analysis
and Replanning
Tool (DART)

✔ K.
Dynamic Analysis
and Replanning
Tool (DART)

A driverless robotic car named ____ sped through the rough terrain of the Mojave desert at 22 mph, finishing the 132-mile course first to win the 2005 DARPA Grand Challenge. This is a Volkswagen outfitted with cameras, radar, and laser rangefinders to sense the environment and onboard software to command the steering, braking, and acceleration (Thrun, 2006). The following year CMU's Boss won the Urban Challenge, safely driving in traffic through the streets.

✔ G. STANLEY

✔ G. STANLEY

All Answer Choices

- A. an angent
- B. Intelligence
- C. MAPGEN
- D. Machine Translation

- E. Bayesian Reasoning/Network
- F. back-propagation
- G. STANLEY
- H. DEEP BLUE
- I. logical reasoning
- J. rationality
- K. Dynamic Analysis and Replanning Tool (DART)
- L. PackBot
- M. artificial intelligence
- N. Hidden Markov models (HMMs)

Tuesday, October 6, 2015 4:48:51 PM CDT

← OK