Essay on intelligent agents

Part 1

An agent is someone or something that is employed to act on one's behalf and other hand intelligent is an act of having intelligence especially of the highest level as compared to other agents. In this regard, intelligent software is the software that does some work in the background and without any form of intervention of human beings. Some entities of software that undertake some operations on behalf of some other users and also with some interdependence have some degree of knowledge and they are therefore regarded as intelligent.

Intelligent agents continuously perform three functions: perception of dynamic conditions in the environment; action to effect conditions in the environment and reasoning to interpret perceptions, solve problems, draw inference and determine actions (Hayes-Roth, 1995).

Computers are also considered as the intelligent agents, for example in business, computers can help us locate pertinent information, to schedule work, to locate resources and use of databases. Also in engineering, computers can help us develop more effective control strategies, to create better designs, to explain past decisions and to identify future risks.

There are instance where the intelligent agent are programs, application, network and internet agent. All these are software intelligent agents. Video games, networking, electronic mails and electronic commerce are some of the software intelligent agent.

Both hardware intelligent agent and software intelligent agent have some features in common such as their ability to adjust to the condition of the

environment. One can also rely on them to perform a task. In addition; both can learn something in the environment where they operate with minimum intervention

However there is a difference when it comes to the type of knowledge that is needed to drive them.

Part 2

This is actually the approach that tries to investigate whether the system is of intelligence or rather assumes the intelligence. The Turing test is based on computing and intelligence. The Turing test is trying to answer the questions, " can machine think?" and " can machine behave intelligently?" The Turing test predicted that by 2000, a machine might have a 30% chance to fooling a lay person for 5 minutes and anticipated all major arguments against artificial intelligent in the following 50 years. It also suggested major components of artificial intelligent for example; knowledge, reasoning, language, understanding and teaching.

What justification can you have for a person who do not believe in a God but is actions are morally upright?

Why should one believe revolution is true?

Where do people go when they die?

God created us. Who created god. How is this possible?

How many times have you gone to hell?

The computer will not answer these questions well because the ambiguity.

The computer cannot answer questions that are not scientifically proven or questions which do not have definite answers.

Example of declarative knowledge

when somebody get to know that what is used in to project a picture in a

television is a CRT

A person knowing to drive a car.

When a tourist learn that the cheetah is the fastest animal

Example 0f procedural knowledge

A student learning a formula that is used in solving a mathematical problem.

A student learning to use the grammar rules while communicating

Part 3

1) In the text we briefly discussed the problems of understanding natural

languages as opposed to formal programming languages. As an example of

the complexities involved in the case of natural languages, identify situations

in which the question " Do you know what time it is"? have different

meanings.

There are several limitations of natural languages as opposed to formal programming languages:

(i) Bulky – symbols are many and hence many strings can be formed.

(ii) Noisy- this means there so many words but same meaning.

(iii) They lack standard.

(iv) They are quite dynamic-keep on changing.

(v) They can display several meanings

(vi) Ambiguous- natural languages lack clarity and this makes it to be

difficult in reading.

(vii) Lacks modularity- it is always difficult to modularize natural language.

2) Give some examples of declarative knowledge. Give some examples of procedural knowledge.

Examples of declarative knowledge

-Having knowledge in a programming language

-Storing phone numbers in our memory

Examples of procedural knowledge

-Having knowledge of computer (computer expert)

3) In the context of a production system, what is the difference between a state graph and a search tree?

Search tree- the search tree on the other hand is generated before the search is started.

4)

5) Describe how the problem of traveling from one city to another could be framed as a production system. What are the states? What are the productions?

Travelling from one city to another can be considered to be a production system if there more than one alternative routes that leads to the city. In addition, there are cities that you pass trough before reaching destination. The destination where you are going becomes the goal.

States are the various cities that are in between the city where you start and the city where you are going.

Productions are all the complete alternatives routes that one can take from the start (start city) to goal (destination city).

Nilsson, N (2006) Principles of artificial intelligence Birkhäuser.

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Prentice Hall.