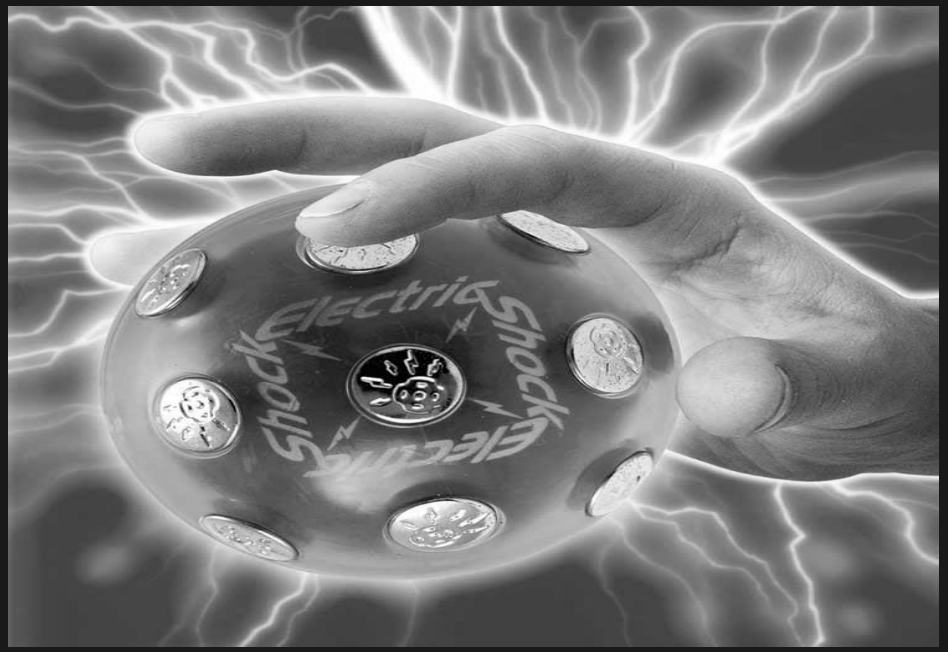
SHOCK BALL HOT POTATO



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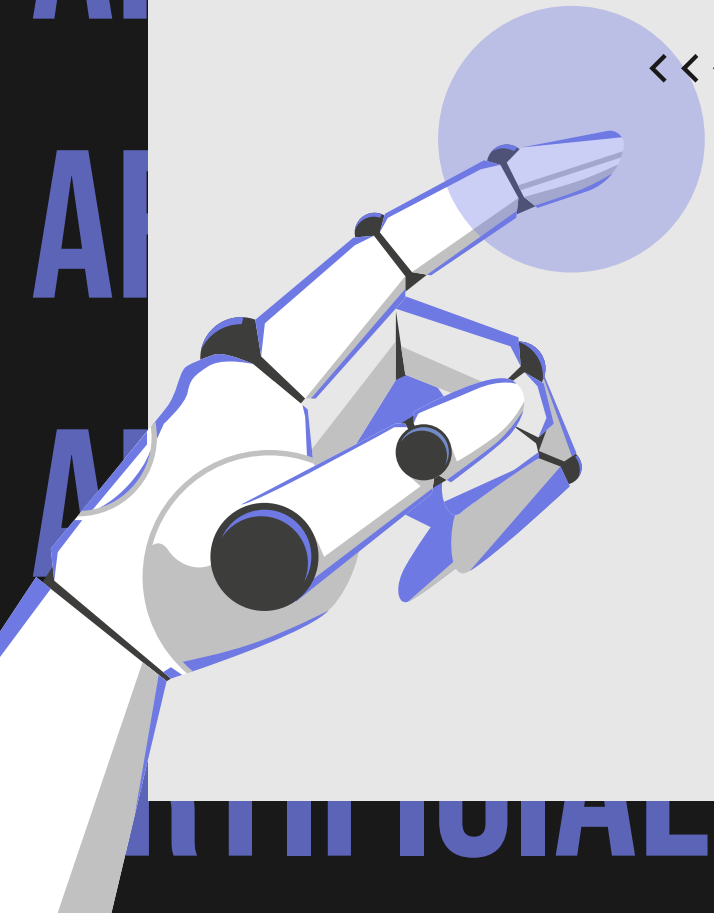


ELECTRONIC PUBLISHING / ARTIFICIAL INTELLIGENCE (AI)

Units 14 & 15



1 bitmapped graphics



3 reflow



- 1.2 GHz processor
- 128 MB Ram
- 330 MB available hard drive space

4 system requirements



5 active matrix display

2 black and white

word wise PUBLISHING

We are pleased to announce that many of our **publications** are now available for purchase as ebooks! What are the benefits of reading ebooks? They are convenient and instantly available! We **upload** new books daily. Read them online on a web browser, or **download** them and read them **offline**. Ebooks are available:

On our handheld **ergonomic** eReader.
Read your ebook anytime, anywhere!
Zoom and **reflow** features display text at any size needed.
The **active matrix display** and **sub - pixel rendering** provide crisp images in any light.
Black and white photographs and illustrations appear as **bitmapped graphics** for best quality.

On web browsers:
Available in many formats – no need to install new software.
Check our **system requirements** and find a list of supported **PDF readers** in the information section of this website.



6 publications

Get ready!

1 Before you read the passage, talk about these questions.

1 Why do people buy ebooks?
2 How will electronic publishing change the publishing business?

Reading

2 Read the announcement on a publishing company's webpage. Then, choose the correct answers.

1 What is the announcement mostly about?

1 What is the announcement mostly about?

A how to download an ebook
B different systems that support ebooks
C the qualities and prices of eReaders
→ D the availability and quality of the company's ebooks

2 Which of the following does the eReader NOT feature?

A reflow
→ B PDF readers
C sub-pixel font rendering
D bitmapped graphics

3 What can you infer about Word Wise Publishing's ebooks?

A Some feature color illustrations.
→ B The number of available books is increasing.
C They are less expensive than paperback books.
D Viewing their pictures requires extra software.

Vocabulary

3 Match the words (1-7) with the definitions (A-G).

1 F upload
2 C ergonomic
3 D publications
4 E PDF readers
5 G offline
6 A system requirements
7 B active matrix display

A the software or hardware that is needed to run a program
B a type of screen that can display a very clear image
C designed to prevent strain or injury
D books or magazines produced by a publishing company
E a program that opens text documents
F to make data available on the Internet
G being available for use even when not connected to the Internet

MISSION STATEMENT

ARTIFI
INTELL
(AI)

4 Write a word that is similar in meaning to the underlined part.

1 The picture is in <u>many shades of gray</u>.
_ _ _ c _ _ _ d w _ _ _ _

2 The image is formatted to <u>fit many different screen sizes</u>.
_ e _ _ _ _

3 The text is clear due to <u>a process that improves clarity</u>.
s _ _ _ _ _ e _ r _ _ _ _ _ _ _ _

4 Did you <u>transfer from the Internet to your computer</u> the files?
_ _ w _ _ _ _ _

5 The images are actually <u>made up of many little points of color</u>.
_ _ t _ _ _ _ _ _ g _ _ _ _ _ _ _



Artificial Intelligence, the Future of Technology

Will **Heuristics** Lead to **Consciousness**?

By Peter Smith

Computers perform complex calculations that no human could complete. Yet, they remain unable to think for themselves. That's something **cognitive scientists** want to change. Their research focuses on two types of thinking: **case based** and **model based reasoning**. Case based reasoning compares similar problems. Model based reasoning examines cause and effect. But these different approaches have the same problem. Their **algorithms**, like most rules, aren't always right.

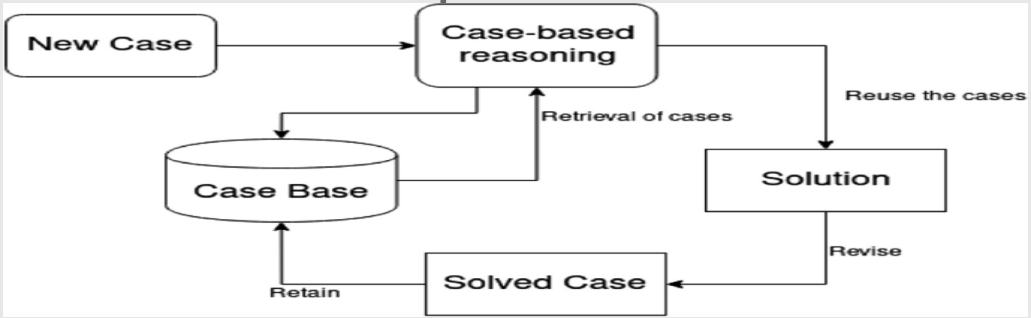
That's where heuristics comes in. With heuristics, computers are avoiding that problem. Instead of following rigid guidelines like regular algorithms, heuristics search for acceptable solutions. As these modified algorithms improve, **machine learning** leaps forward. Advanced computer **agents** and **robots** now find solutions independently. **Pattern recognition** has even made **computer vision** possible. The range of what robots and computers can do grows each day. The invention of a self learning computer may soon be possible.

Cause → Effect

5 model based reasoning

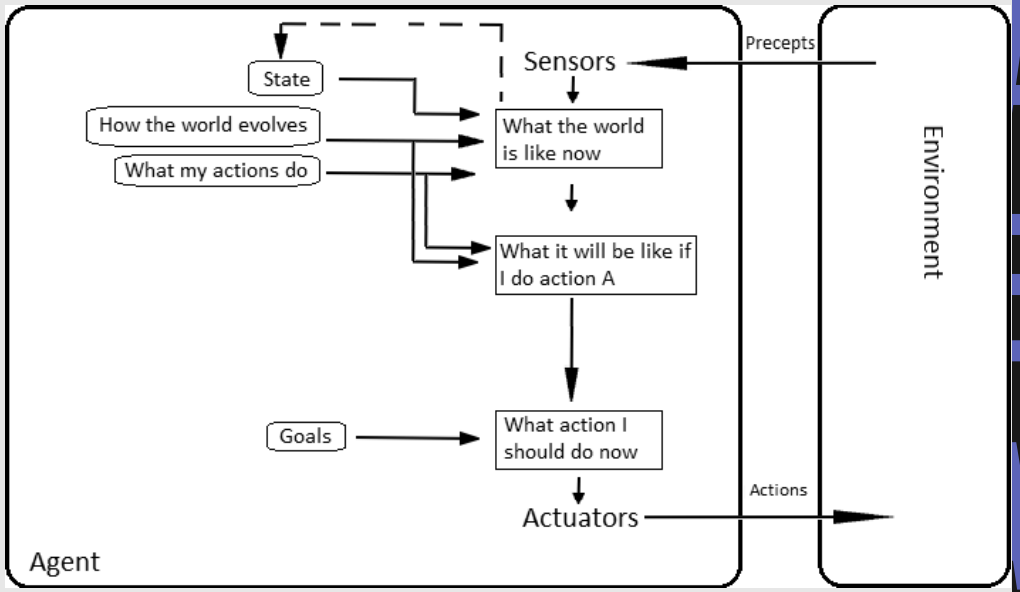
Get ready!

Case-based reasoning (CBR) is an experience-based approach to solving new problems by adapting previously successful solutions to similar problems. Addressing memory, learning, planning and problem solving, CBR provides a foundation for a new technology of intelligent computer systems that can solve problems and adapt to new situations.



MODEL BASED REASONING

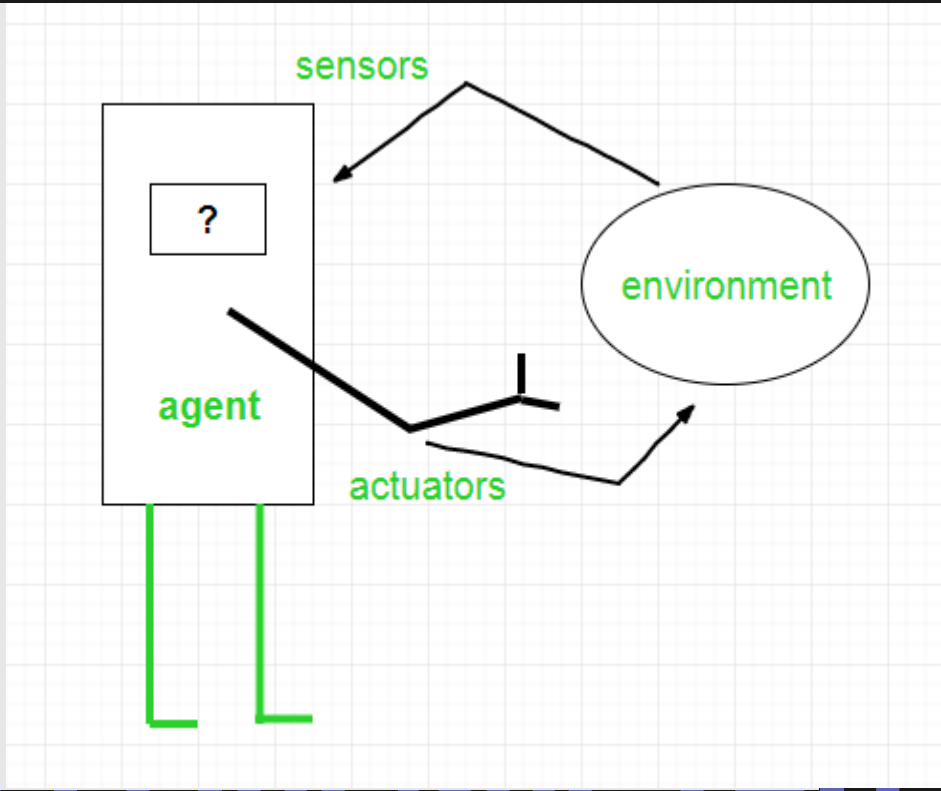
In artificial intelligence, **model-based reasoning** refers to an inference method used in expert systems based on a model of the physical world. With this approach, the main focus of application development is developing the model.



AGENT

An agent is anything that can be viewed as :

- perceiving its environment through **sensors** and
- acting upon that environment through **actuators**
- **An agent is a computer that observes and reacts to the conditions in a certain environment**

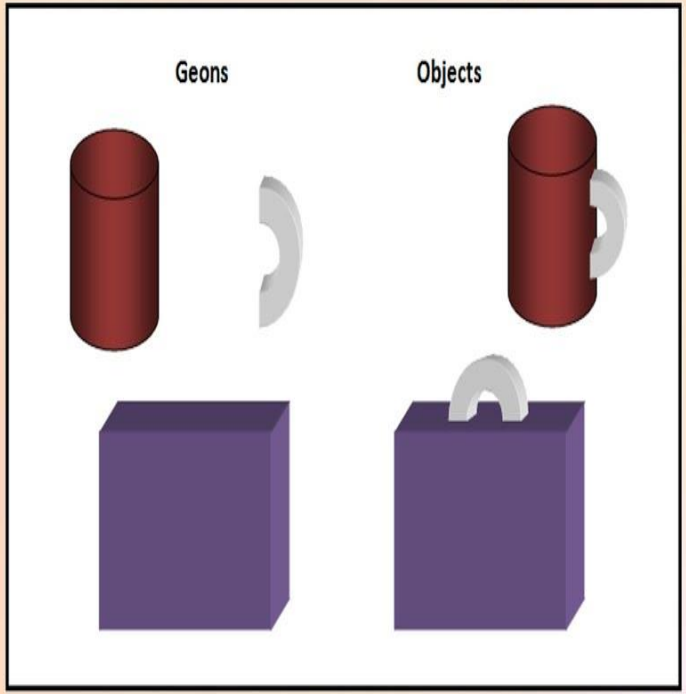


ARTIFICIAL INTELLIGENCE (AI)

Cognitive scientists **study intelligence and behavior, with a focus on how nervous systems represent, process, and transform information**.

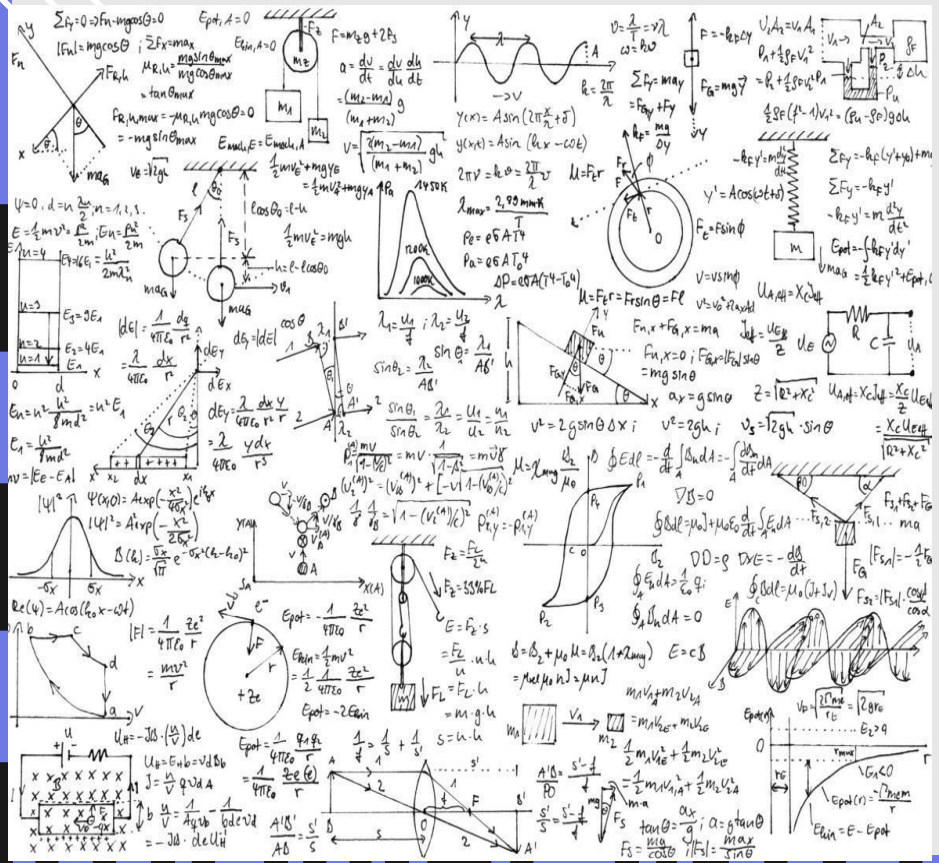


Pattern Recognition

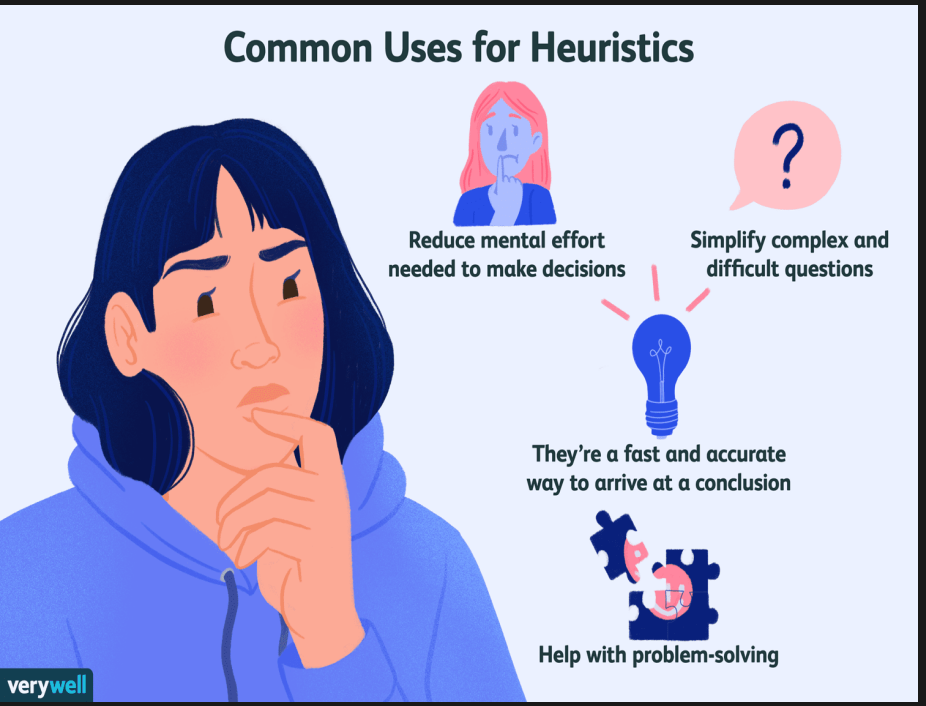


- Mr. DeBacco

It’s a process of classifying objects by appearance



An algorithm is a rule or set of rules that provides steps to take or questions to ask in order to solve a problem.



A heuristic is an inexact algorithm that is based on intuitive and plausible arguments which are "likely" to lead to reasonable solutions for a given problem, but are not guaranteed to do so.

ARTI CIAL INTE IGEN (AI)



The state of understanding and realizing something

ARTIFICIAL INTELLIGENCE (AI)

WORKING ON VOCABULARY

Reading

2 **Read the magazine article on Artificial Intelligence. Then, mark the following statements as true (T) or false (F).**

1 F Case and model based reasoning face different complications.

2 T Heuristics don't have rigid guidelines like regular algorithms.

3 F Computer vision is improving pattern recognition.

Vocabulary

3 **Match the words (1-6) with the definitions (A-F).**

1	C pattern recognition	4	A robot
2	F cognitive scientist	5	B heuristic
3	D consciousness	6	E algorithm

A a machine capable of independent action

B a set of rules to solve a problem that seeks any solution

C the process of classifying objects by appearance

D a sense of oneself and one's surroundings

E a rule or set of rules to solve a problem with limited solutions

F a person who studies how the mind works

4 Write a word that is similar in meaning to the underlined part.

1 Giving machines the ability to see is improving.
c _ _ _ _ u _ _ _ _ _ i _ _ _ o _

2 Examining previous experiences to make decisions works best.
m _ _ e l b _ _ _ _ _ _ _ e _ _ _ o _ _ _ n g

3 I use examinations of cause and effect relationships to make decisions.
_ a _ e _ a _ _ _ _ r _ _ _ s _ n _ _ _ _

4 Peter works in the science that attempts to create thinking robots.
_ r _ _ _ f _ _ _ i _ _ _ i _ _ _ e _ _ _ i _ _ _ n _ _

5 This computer that reacts to an environment turns the heat on when it's cold.
_ g _ _ _ t

6 The field of creating algorithms that computers can learn from often uses heuristics.
m _ _ _ _ i _ _ _ _ _ _ _ _ r _ i _ g



I GROUP

Create 3 the hardest questions

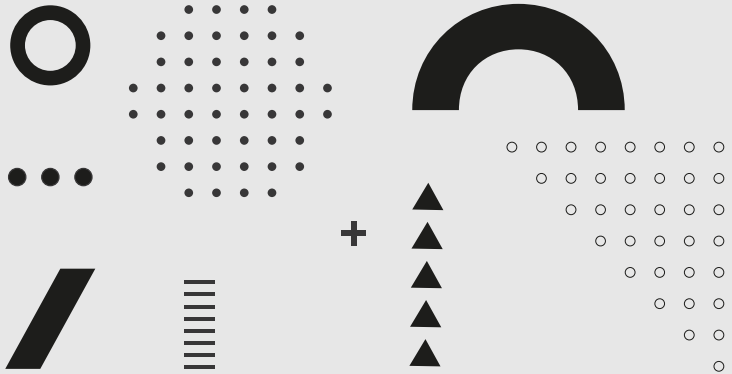


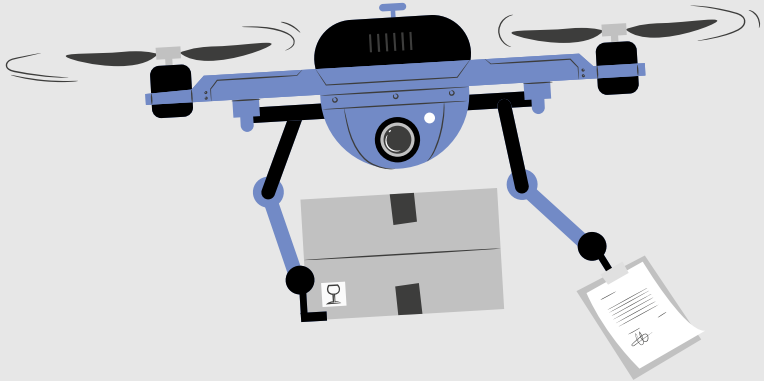
II GROUP

Give your questions to other teams

ALTERNATIVE RESOURCES

Try in a group complete the text





ARTIFICIAL INTELLIGENCE (AI)


Thank You
For Your
Attention