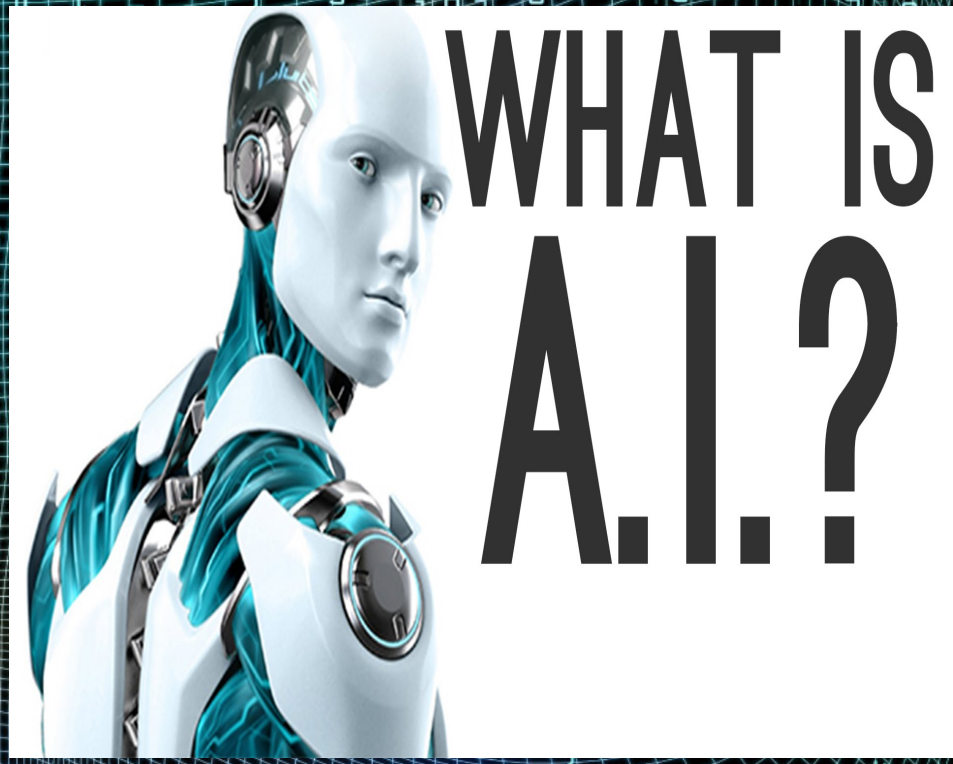

Welcome to the world of
Artificial Intelligence

- Artificial Intelligence is a way of making a computer, a computer-controlled robot, or a software think intelligently, in the similar manner the intelligent humans think.



Goals or fields of AI

AI
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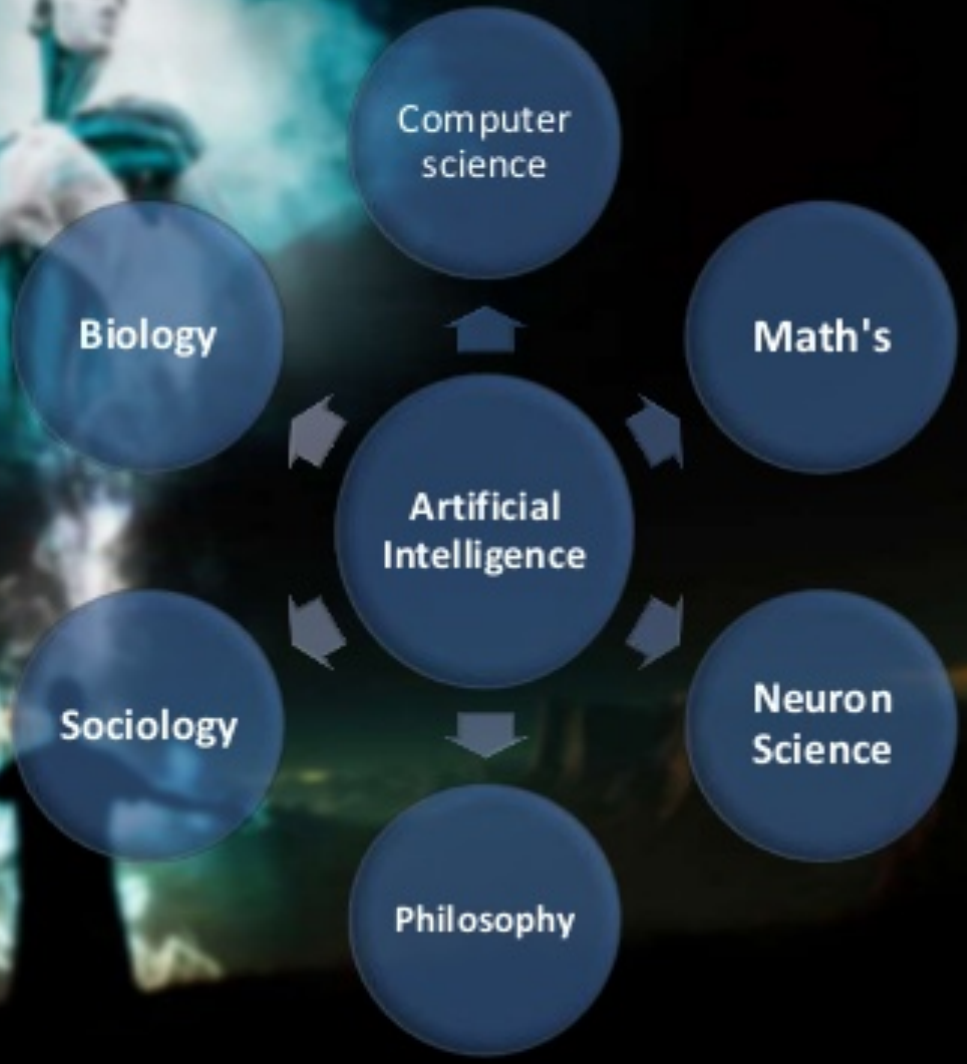
- ✓ Deduction, reasoning, problem solving.
- ✓ Knowledge representation.
- ✓ Planning.
- ✓ Learning.
- ✓ Natural language processing.
- ✓ Motion and manipulation.
- ✓ Perception.
- ✓ Social intelligence.
- ✓ Creativity.
- ✓ General intelligence.

CREATED BY : HEMANT

What Contributes to AI ?

Artificial intelligence is a science and technology based on disciplines such as :



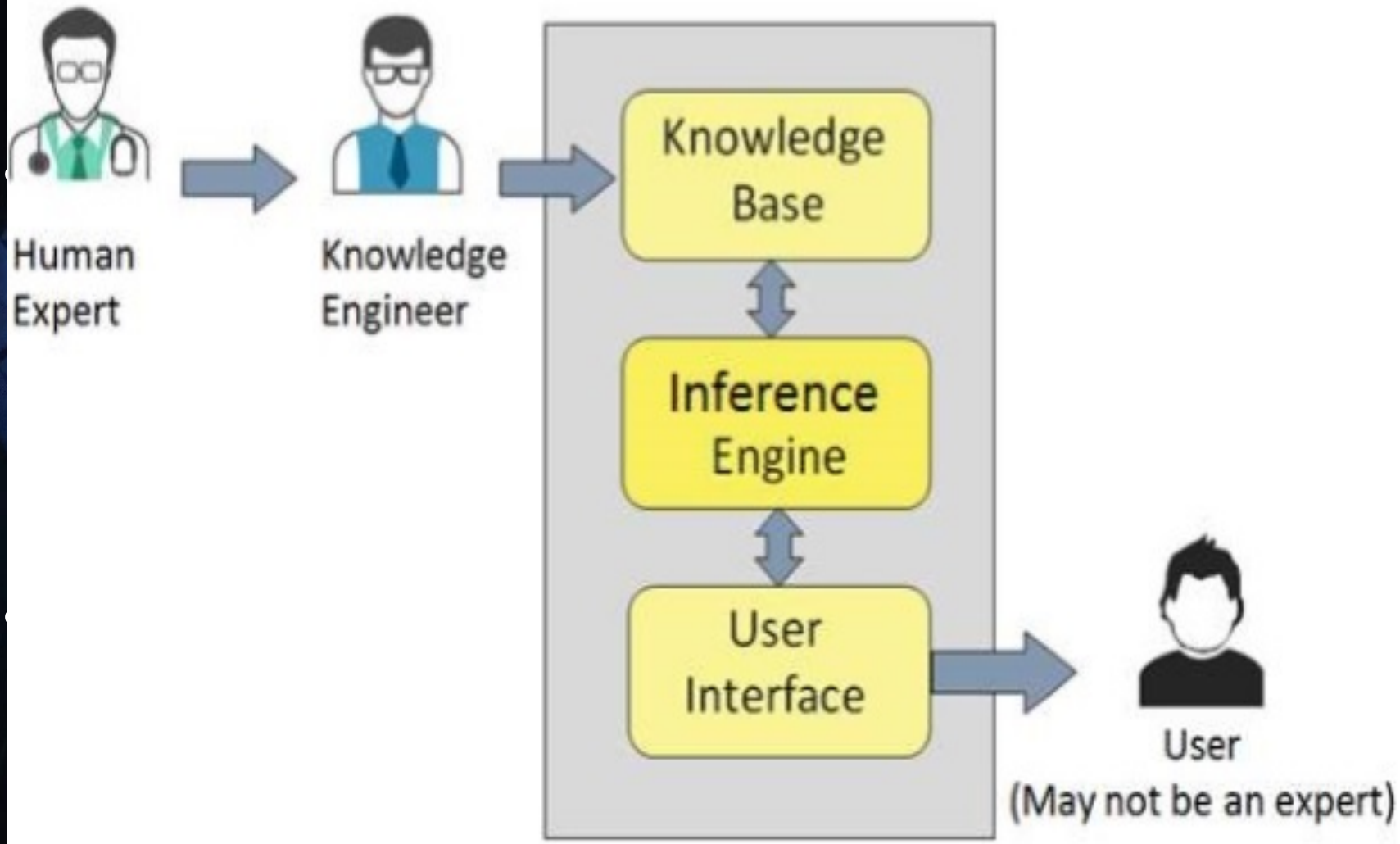
Out of the following areas, one or multiple areas can contribute to build an intelligent system.

APPLICATIONS OF AI

- Gaming
- Natural Language Processing
- Expert Systems
- Vision Systems
- Speech Recognition
- Intelligent Robots

Components of Expert Systems

RESEARCH AREAS OF AI



2. Natural Language Processing

- Natural Language Processing (NLP) refers to AI method of communicating with an intelligent systems using a natural language such as English.
- Examples: Google Now feature, speech recognition, Automatic voice output.

3. ARTIFICIAL NEURAL NETWORKS

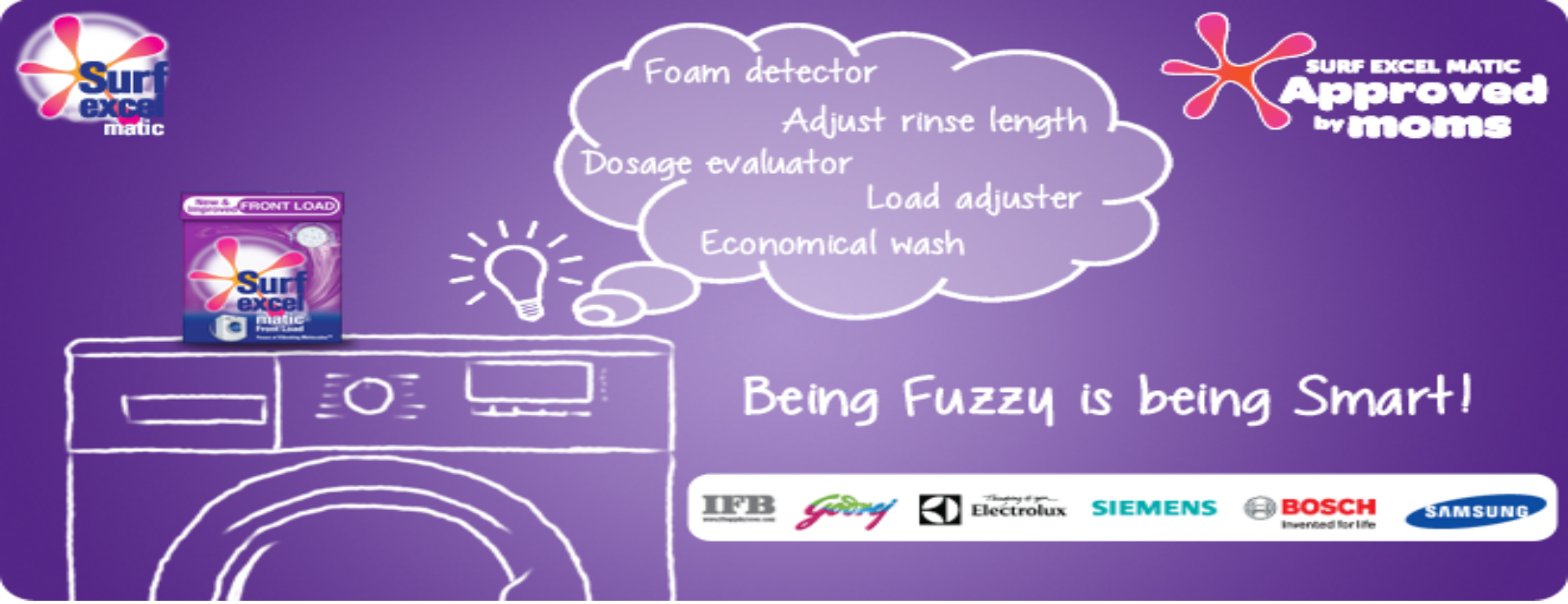
Artificial neural networks is inspired from the natural neural network of human nervous system. It is composed of a large number of highly interconnected processing elements (neurones) working in unison to solve specific problems. ANNs, like people, learn by example.

Examples – Pattern recognition systems such as face recognition, character recognition, handwriting recognition.

4. Fuzzy Logic Systems

Fuzzy Logic (FL) is a method of reasoning that resembles human reasoning. The approach of FL imitates the way of decision making in humans that involves all intermediate possibilities between digital values YES and NO.

Examples – Consumer electronics, automobiles, etc.



WHY IS IT USEFUL?

Automatic Braking System

Fuzzy Logic

Is car close? : 0-1 (Range of No to Yes)

Brakes : 0-1 (Range of Off to On)

5. Robotics

- Robotics is a domain in artificial intelligence that deals with the study of creating intelligent and efficient robots.
- What are Robots?

Robots are the artificial agents acting in real world environment.

- **Objective**

  Robots are aimed at manipulating the objects by picking, moving, modifying objects thereby freeing manpower from doing repetitive functions.

ARTIFICIAL INTELLIGENCE-ISSUES

- There is an opinion among researchers and developers that AI could grow so immensely strong that it would be difficult for humans to control.
- Humans developed AI systems by introducing into them every possible intelligence they could, for which the humans themselves now seem threatened.
- Threat to Privacy

  An AI program that recognizes speech and understands natural language is theoretically capable of understanding each conversation on e-mails and telephones.

- **Threat to Safety**

  The self-improving AI systems can become so mighty than humans that could be very difficult to stop from achieving their goals, which may lead to unintended consequences.

BBC: Stephen Hawking warns artificial intelligence could end mankind (Dec 2, 2014)

"He told the BBC: The development of full artificial intelligence could spell the end of the human race."

"It would take off on its own, and re-design itself at an ever increasing rate," he said. "Humans, who are limited by slow biological evolution, couldn't compete, and would be superseded.

CONCLUSION

- Artificial intelligence is increasingly being put to use in virtually every sector of the economy, from farming to education. This Project only scratches the surface of the many ways AI is generating substantial social and economic value, and transforming everyday life for the better. Given the immense benefits that AI is already offering society—and its huge potential to do even more—it would be a serious mistake to take the foot off of the accelerator.

ARTIFICIAL INTELLIGENCE

THANK YOU