
Review: Robotics in Artificial Intelligence

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Abstract: *The wildest imagination of AI has been captured in scientific community as well as in the general public. Artificial intelligence and robotic both have a same common root interaction and scientific discussion. Robots and robotics leaded from intelligent machine.Robotics as a preferred testbed for artificial intelligence. Robotics researchers have also tackled some of the issues that all dealt with in the present paper but the view of robotics research towards Artificial Intelligence may not be properly reflected in the paper.*

I. Introduction:

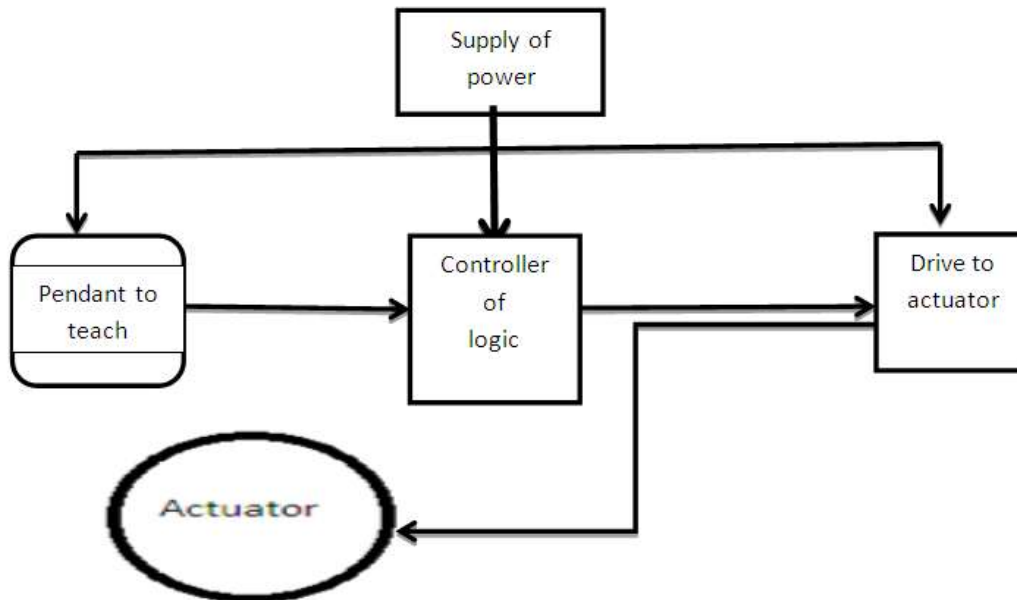
Artificial intelligent and robotics have a border line in between the work which is very typical to establish. It is more efficient to draw lessons from the past successes and failures to understand the most impact of AI. Again the prototypical case of AI system is viewed as the development of robots. There may be some argue that not each and every machine will be a robot. Work on robots is an essential role in play of AI research as a major area. Current AI technologies are used in online advertising,driving,aviation,medicine and personal assistance image recognition. True and complete AI does not yet exit. At this level, AI will mimic human cognition to a point that it will enable the ability to dream, think, and feel emotions and have own goals. However, current AI technologies are limited to very specific applications. This has led to both the excitement and fear in many that AI will surpass all humans in all the fields where it marches on. One limitations of AI, for example, is the lack of "common sense".

II. Problems In Robotic Research:

A research of robotic problem is a statement about an area of concern, a condition to be improved, a difficulty to be eliminated, or a troubling question that exists in scholarly literature, in theory, or in practical that points to the need for meaningful understanding and deliberate investigation. In some of the social science disciplines, the robotic research problem is typically posed in the form of a question. A robotic research problem does not state how to do something, offer a vague or broad proposition, or present a value question.A reader is oriented to the significance of the study and the research question or hypotheses to follow.

III. Performance In Robotic:

The first purely deliberative architectures view the robot as an agent embedding a high level representation of the environment and of the action that it can perform. In fact, the use of a high level language is not possible, since it would necessarily require building a world model, and thus reasoning is usually compiled into the structure of the executing program. Cognitive robots can be controlled at a high level, by providing them with a description of the world and expressing the tasks to be performed in the forms of goals from different perspectives, that can be classified into two groups: action theories and system architectures. Reactive architectures, while suitably addressing the dynamics of the environment, do not generally allow the designer to consider general aspects of perception, and to identify complex situation the most recent view of cognitive robots, that as been accepted, for example in the EU framework, certainly keeps the original goal of embedding reasoning agent into a real robot, but also takes a more general perspective, by looking at the perception/action cycle in a broader sense, in bio-inspired systems, as well as in the work on recognition and generation of emotional behaviors.



Representation of manufacturing robot

Designing In Robotics:

Designing a robot requires balance between size, motor power and battery power this three elements are connected. There are many features that are considered important in the design of agents designing and each proposal describes a solution that provides for some of the features although robotics is more accessible than ever any robots is a complex system and require a basic understanding of electricity, mechanical design and programming to create

Then contain some level of computer program that determines what, when and how a robot does something. Often, the work on architectures is developed in the context of robot programming environments, including ad-hoc specialized control languages. more formally a robotic design is define as;(noun)a specification of a robot, manifested by a robotic designer, intended to accomplish goals, in a particular robotic environment, using a set of primitive components, satisfying a set of requirements, subject to constraints;(verb, transitive)to create a robotic design, in an robotic environment.

Applications:

In this section, we report on a few applications scenarios, where the research on Artificial Intelligence and Robotics has been developed in Italy. Artificial intelligence is the simulation of human intelligence process by machines, especially computer system.

Advantages And Disadvantages:

AI robotics are used in manufacturing, in search, in mission of rescue and in military. AI robotics are used in all the world wide factories but many of the people are lost their jobs because the AI robots is more efficient and precise . where the human get crushed the robots are able to go for in known as well as unknown places. But robots are in need of power supply and need of maintenance and inefficient of cost.

IV. Conclusion:

It is very well known that the application, multi-agent and the techniques AI, designing tools and operate robotic system are the great result in world wide. Truly most of the results are reported through literature in experimental or prototype solution, but the applications of real industries are some of behind. most of the researches are going through some part of suggestion for new research directions

Reference:

- [1]. R. C. Arkin. Just what is a robot architecture anyway? Turing equivalency versus organizing principles. In *AAAI Spring Symposium on Lessons Learned from Implemented Software Architectures for Physical Agents*, 1995.
- [2]. A. Bicchi, and G. Tonietti. Fast and soft arm tactics: Dealing with the safety-performance tradeoff in robot arms design and control. *IEEE Robotics and Automation Magazine* 11(2), 2004.
- [3]. A. Bonarini, M. Matteucci, and M. Restelli. Filling the gap among coordination, planning, and reaction using a fuzzy cognitive model. In *RoboCup 2003: Robot Soccer World Cup VII*, pages 662–669, Berlin, Heidelberg, 2003. Springer-Verlag.

- [4]. R. A. Brooks. A robust layered control system for a mobile robot. *IEEE Journal of Robotics and Automation*, 2(1), 1986.
- [5]. C. Castelpietra, A. Guidotti, L. Iocchi, D. Nardi, and R. Rosati. Design and implementation of cognitive soccer robots. In *RoboCup 2001: Robot Soccer World Cup V*, pages 312–318, Berlin, Heidelberg, 2002. Springer-Verlag.
- [6]. A. Chella, M. Frixione, and S. Gaglio. Understanding dynamic scenes. *Artificial Intelligence*, 123:89–132, 2000.
- [7]. A. Chella, S. Gaglio, and R. Pirrone. Conceptual representations of actions for autonomous robots. *Robotics and Autonomous Systems*, 34:251–263, 2001.
- [8]. L. Chittaro and A. Montanari. Efficient temporal reasoning in the cached event calculus. *Computational Intelligence Journal*, 12(3):359–382, 1996.
- [9]. S. Coradeschi and A. Saffiotti. An introduction to the anchoring problem. *Robotics and Autonomous Systems*, 43(2-3):85–96, 2003.
- [10]. P. I. Corke. *Visual Control of Robots: High-Performance Visual Servoing*. Wiley, New York, 1996.
- [11]. G. De Giacomo, L. Iocchi, D. Nardi, and R. Rosati. A theory and implementation of cognitive mobile robots. *Journal of Logic and Computation*, 5(9):759–785, 1999.
- [12]. R. Fikes and N. Nilsson. STRIPS: A new approach.