

Artificial intelligence and expert systems

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Abstract: This project focuses on the two areas of research in the field of artificial intelligence, investigates the problem of robotic movement in places, approaching an existing object, passing through their doors, the selection of images from research on machine intelligence. We analyze what expert systems are, knowledge processing systems in their specialized field. We see on a scientific basis that ETs are entrusted with sensitive issues such as consulting, analysis, consulting, diagnosis. The main goal is to create robotic techniques that will help people solve difficult problems.

The concept of "artificial intelligence" has been studied, and its future development will serve to create a new generation of computers that help humanity, its impact on the development of information technology with the field of programming we can say that it serves as a basis for creation.

Key words: Artificial Intelligence, ECMs (Electronical Computing Machines), Expert Systems, Algorithms, Identification, Robotics.

ACKNOWLEDGEMENT. The problem of creating artificial intelligence has already taken over the human mind. Even those who perform logical processes without mistake, play chess, or perform complex analysis of spectra computers are other tools that help a person the curse could not approach the human intellect.

The direction of research in the field of artificial intelligence is divided into two areas of work on artificial intelligence, there are two different views on how to build artificial intelligence systems.

1. First of all, the result is important, that is, a good combination of tendencies of artificially created and natural intelligent systems, the developer of artificial intelligence should not copy or even take into account the characteristics of the internal mechanisms that make up the tendency of natural living analogues.

2. Analysis of data on the methods of formation of mental tendencies in man and the study of the mechanisms of natural thinking it is possible to lay the ground work for building artificial intelligence, which is why these constructions are primarily based on the adoption of principles such as modeling.

Technical means should be implemented in the specific features of the function of biological objects.

Thus, the first direction of human intellectual activity examines the products, the intellectual activity of its composition solve various problems, theorems.

The evidence is that these products are modern technical means, ie computers. If the computer successfully solves specific problems If programming is successful, it is an appropriate type of intellectual activity is automated.

The success of this direction of artificial intelligence is both ECM and artificial programming is associated with the development of a complex of scientific and technical research called computer science of artificial intelligence.

The second direction provides more detailed information on the neurophysiological and

psychological mechanisms of intellectual activity.

It depends on the mental inclination of the person. Manufacturers strive to develop these mechanisms with the help of technical devices, their inclinations with human accord meet certain, pre-given limits. As a result, various relevant human activities are automated. With the creation and use of intelligent robots solving related problems is an example of this.

1st generation in artificial intelligence With the advent of computers, at the same time began to develop programs that solve puzzles, play various games and prove theorems. can be passed through. Significant attention is paid to the problem of selecting images from machine intelligence research. In robotics, the method of selecting visual images is considered to be the most advanced.

MATERIALS AND METHODS

The algorithms that implement these methods are machine or technical is a key part of the building system. Different optics for them systems, camcorders, and other sources of information. Technician the main tasks of the construction system can be divided into two classes:

Inspection and identification.

The task of the inspection is to check the availability of facilities inspection, identification and management of defects.

The technical function of identification is to identify specific objects

Determination of the position of the source consists of the separation of objects in the case of convergence - closure, identification of similar objects, etc. Approximately 30% of the technical construction system is for the identification of objects.

Finding complex scenes in the field of machine building and "Understanding" is actively developing, including the addition of three-dimensional objects in space. Information on the location and configuration of shadows, halftones, textual properties of the object is used. In addition to visual information, its other in the work technical systems types are also used: tactile (about convergence), proximity (about distance) position (about location) force and torque. Special source of information produced is: Distance size, shadow size, ultra sound lacquers.

In these systems, i.e., the external state of the robots is the modulus or its the modules that build the internal state are processed. Of such systems some are merely the nature of measurement, while others recognize images advanced means of obtaining are used. Artificial intelligence as part of research on the next decade - an independent expert system or knowledge engineering was formed.

Expert systems are systems for processing knowledge in a narrow specialized area of user decision making at the level of qualified experts.

ETs are tasked with sensitive issues such as counseling, analysis, consulting, and diagnosis. The use of ET in industrial enterprises allows to increase productivity and skills of specialists.

The accumulation and long-term storage of knowledge is the biggest gain of ETs. Unlike humans, ETs are objective in relation to any information, which increases the quality of the conducted experiment, reducing the occurrence of errors in matters that require a lot of knowledge.

The task of this direction is the general development and research of user programs, which are difficult for the human expert, from the introduction of knowledge and processes to solve tasks. The general importance of expert systems can be incorporated into the system of artificial intelligence, which not only performs the given processes, but also generates a search meteor procedure and is used in the process of solving new specific tasks.

There is a huge interest in expert systems for three reasons

First, they have a wide range of tasks in informal areas focused on the solution. Second, programming using an expert system experts who do not know, are independent of the applications that interest them to expand the use of computer technology at once.

Third, expert systems a person who is not equipped with an expert system in solving tasks in practice which achieved results that surpassed expert capabilities. Expert systems in the design of integrated circuits, faults extensive in patching, military applications, and program automation scattered.

In short, artificial intelligence represents a person's relatively stable mental ability, such as the ability to receive information and use it to solve specific problems.

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