ARTIFICIAL INTELLIGENCE: ADAPTING TO VIRTUAL BRAIN - NEED OF HOUR IN 21ST CENTURY

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Abstract:

In this paper, researcher present the research about blue brain and explained the concept and functioning about blue brain.

The blue brain project is swiss brain research their aims to create a digital reconstruction of human brain. Blue brain is the project which was discovered by neurologist Henry Markram (Israeli) after his successful theory about blue brain project then he was moved to IBM and carried out their project with IBM. Generally blue brain is the name given to the world first virtual brain. That means the machine can function like Human's or Human brain. They attempt to create an artificial brain in which it can perform several functions just like humans like they can think, Sense, Response, take Decision and anything in memory. The blue brain project strategy is to convert a human brain into a virtual artificial brain. In blue brain it was concept related to neuroscience experiments and the literature through the database and analysis through digital reconstruction. It was first attempt to reverse-engineering.

Keywords:*Blue; Artificial Brain; Nanobots; Virtual; Neurons; Artificial Intelligence; Sensory Input;Integration; Motor Output.*

Introduction:

In this topic we can explaining about blue brain project, Nanobots, virtual, artificial brain and many more topics. From several research we can assumed that in future the human brain can attacked by the blue brain. The blue brain is the attempt towards the reversed-engineering and it was recreate at the cellular level inside the computer simulation with the help of Artificial Intelligence.

Blue brain is the world's first virtual brain. It was initiated and founded by Henry Markam in May 2005 at EPFL and then carried out with IBM. The goal of the project are to gain to complete understanding of the brain and better and faster development of brain disease treatments.

1) What is Blue brain or virtual brain?

In May 2005 the successful theory by Henry Markam about blue brain or virtual brain then they carried out

their project with IBM. Now they were try to make the digital reconstruction of the human brain to virtual brain or artificial brain. The blue brain is the name given to world's first virtual brain. It would be the first virtual brain. Within 30 years, we able to scan the humans in the robots. We are able to say that this would be a virtual brain i.e. artificial brain. But it would act like human brain like it may able to think, sense, response to others, take decisions etc.

It is possible by using super computer and brief knowledge about Artificial Intelligence. It may require huge memory storage, processing power and interface between human brain and virtual brain. Through this interface the data is stored in artificial brain by using Artificial Intelligence technology. So the knowledge and intelligence of that human brain is kept, even after the death of the person. Blue brain is the project in which they can try to make digital reconstruction of human brain into the artificial one. Virtual brain has the advantage of being on microscopic and microscopic levels where humans can't to reach that level.

2) How to transfer the data in virtual brain?

It will be in the basic manner in which the person may uploaded his brain into a computer. In which they can use many techniques to put all the data in artificial brain. The most likely the method is use is nothing but the robots or Nanobots. The most promising method is to use small robots or Nanobots. Nanobots use for transferring the data into the artificial one. It successful by only the medical surgery, they can transfer into the body of that person, then they travel through circulatory system, they transfer to spine cord and then into the brain. Nanobots are copy all the data from neurons which are present in the human brain, and then transfer to computer or an artificial brain. Nanobots is used as medicine for cancer also. After the capturing all the data from human brain then it may transfer to super computer and then it functions as us. The Information is transfer through neural networks. Using blue gene supercomputer neuron software and it does not consist of an artificial neural networks. Blue brain try to collect all information from the neurons.

3) How it works or it's functioning?

This was the first attempt to make artificial brain, they were try to make artificial brain. Its works like human brain. It may able to take decision, response, think, etc. just like human brain. To understand the concept of about virtual brain we have to know simply three functions.

1) Sensory Input

2) Integration

3) Motor Output

1. Sensory Input: Human brain can able to make decision, response, etc. this will just because neurons which are present in human brain. This function is used into the artificial brain we try to capture all the data from neurons with the help of nanobots.

2. Integration: It is also known as interpretation just like humans can able to taste, smell, sense, etc. this is possible just because of sensory cells and neurons. We can use this function in virtual one, with the help of

nanobots or robots.

3. Motor Output: The neuron present in the brain are work like to send messages to the brain and then the brain works on that message, to get the result. The motor output is just like the brain which works for our body the same thing in the virtual one, the virtual brain is also work for all other function in the robot.

It works with the flow of the chain in which it may passes through first input then it shifted to interpretations and then it gives us output. Then it will moved to memory location then they were processing on that particular command.

So, on the final we can conclude, the project is still running in the IBM it is expected to completed the project after 30 years or it may delay due to technical difficulties.

Review of literature:

1. Preeti Patel Student B.E.(IT), Kirodimal Institute of Technology, Raigarh (C.G.), India
2. Rakesh Patel Lecturer, Department of Information Technology, Kirodimal Institute of Technology.
3. Ekta Agrawal Raigarh (C.G.), India Student B.E.(IT), Kirodimal Institute of Technology, Raigarh (C.G.), INDIA.
4. A Literature Review on Blue Brain by Neeraj Chauhan, Gaurav Singhania, Amit Pandey G.L. Bajaj Institute of Technology and Management Greater Noida, Uttar Pradesh, INDIA.
5. Henry Markram, "The Blue Brain Project", Nature Reviews Neuroscience, 7:153-160, 2006February. PMID 16429124.

They research about blue brain technology with its application. They research about explain the concept and functioning model of Blue Brain.

Research Methodology:

The Research is completely based on Secondary Data which is collected through the published source, magazines, journals, website and books.

Goals:

After completing these project, human error will be less and more accurate. They can represent a human more accurate. They will better understand human's behaviour than us. Then we able to understand concept of hidden objects of brain like neurons, sensory cells, spine cord, etc. because of virtual brain robots can do more efficient work as compares to humans and do less errors than humans or in less amount of time. We can get brief knowledge about artificial intelligence through virtual brain. They used chip technology to transfer the data in the virtual brain.

Objectives:

1. To study the concept about structure and function of blue brain?
2. To study the social awareness about neural network technology?
3. To study the role of AI in the virtual brain?

4. To gather the information about blue gene algorithm used in virtual brain?

Suggestion:

Get brief knowledge about Artificial Intelligence. Researcher can get knowledge about brain and hidden parts in brain and also researchers can gather some information about neurons and functioning about brain. Also get information about Nanobots or robots from this project. From this project we able to understand about reverse engineering.

Conclusion:

Researcher can conclude that the virtual brain is the creation of human brain in the artificial one. We may able to create a digital reconstruction of human brain and it acts as human brain. From this theory about virtual brain can be able to think, take decisions and make quick response.

Reference:

1) Artificial Intelligence Modern approach third edition by Stuart J. Russell

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3) https://www.epfl.ch/research/domains/bluebrain/

4) Artificial Intelligence (Sie) (English, Paperback, Knight Kevin)

5) Introduction to Artificial Intelligence and Expert Systems 1st Edition (English, Paperback, Dan W. Patterson)