

Insight Artificial to Cyborg Intelligence Modeling

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Abstract

Today Artificial Intelligence play vital role to everyday changing and made easy to human life advance automation, but more than of it is Cyborg Intelligence where instead of machine mankind themselves can able to make extreme powerful with implementing and interfacing artificial/Bionic parts with their biological organs and those work together. Hence I have shown in my short communication how one can move for Cyborg Intelligence from artificial intelligence and what are the commons and what are the different to set engineering skills in it.

Keywords: Artificial Intelligence; Humanoid; Bionic; Cyborg; Cyborg Intelligence

Introduction

As humans live longer there is a growing need for availability of organs for transplant however shortage in donations necessitates the development of artificial alternatives with AI often called "Bionic". Advances in medicine have led to the availability of artificial blood, replacement joints, heart valves, and heart-lung machines that are common implanted using AI for Bionic organs. One of the primary and

utilitarian goals of artificial intelligence research is to develop machines with human-like intelligence. Great progress has been made since the start of AI as a field of study. One dominating research paradigm in AI has been based on the assumption that various aspects of human intelligence can be described and understood well enough to the extent that it can be simulated by computer programs through smart representational frameworks and generic reasoning mechanisms. Now a day's fusion take place

Biological beings and computer systems share some common physical foundations. Communication in both biological nervous systems and computer systems, for example, depends on electrical signals. Yet, the gap between these two classes of vastly different systems is obvious and bridge with “Cyborg Intelligence”. Since researchers and practitioners confused between Bionic/AI and Cyborg, let me clear in last attempt to it.

As I discussed already Bionic is biological functions, methods, systems and procedures mimic electronically with neuron interfacing but Cyborg is another possibility in Medical Robotics domains nCyborg "Cybernetic organism" is a being with both organic and Biomechatronic body parts using which human can increase their power in all means and branch of study is “Cyborgology”.

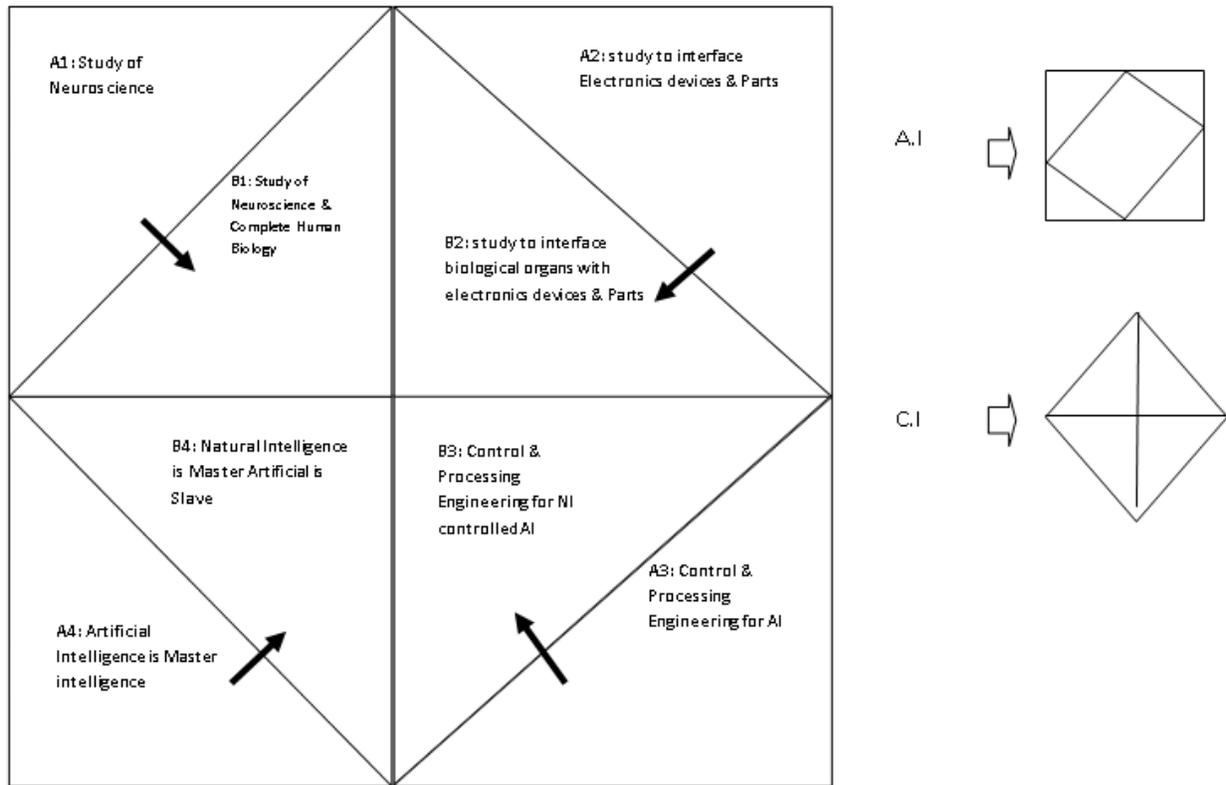
Modeling

Engineering Shift Model

This is my first interesting model named “Engineering Shift Model” and with help of this model I would like to discuss how Cyborg Intelligence (C.I) engineering issues are different as compare to Artificial Intelligence (AI). In this model I exhibit two geometries as rectangle having the four engineering corners A1, A2, A3 and A4 representing to AI

engineering and Diamond inside the rectangle having four quadrants B1, B2, B3 and B4 representing to CI engineering. This model not only display issues but how engineering requirements with mapping change from AI to CI with arrow lines A1-to-B1, A2-to-B2, A3-to-B3 and A4-to-B4 equivalently. At A1 study of neuroscience require to mimic AI electronically but at B1 along with neuroscience complete human biology and anatomy need to study for proper Cyborg Intelligence development and implementation. At B2 engineering is need to design interfaces to established electronic to electronic communication but at B2 paradigm shift and need to design interfaces to establish electronic to biological and vise versa communication between biological organs and electronics parts with exchange ions- electrons. At A3 control processing engineering need to design to control overall AI electronically, but at B3 situation is different need to carry Control & Processing Engineering for NI controlled AI. Happen is like this just because of Master-Slave relation of engineering at A4 changed at B4. At A4 in AI itself Master intelligence buy at B4 Artificial Intelligence cascade with Natural Intelligence (Biological Brain) [2] hence NI become Master intelligence [3] and AI become slave intelligence in engineering issues of Cyborg technology implementation.

Figure (1): Engineering Shift Model



Source: Prof. Md. Sadique Shaikh

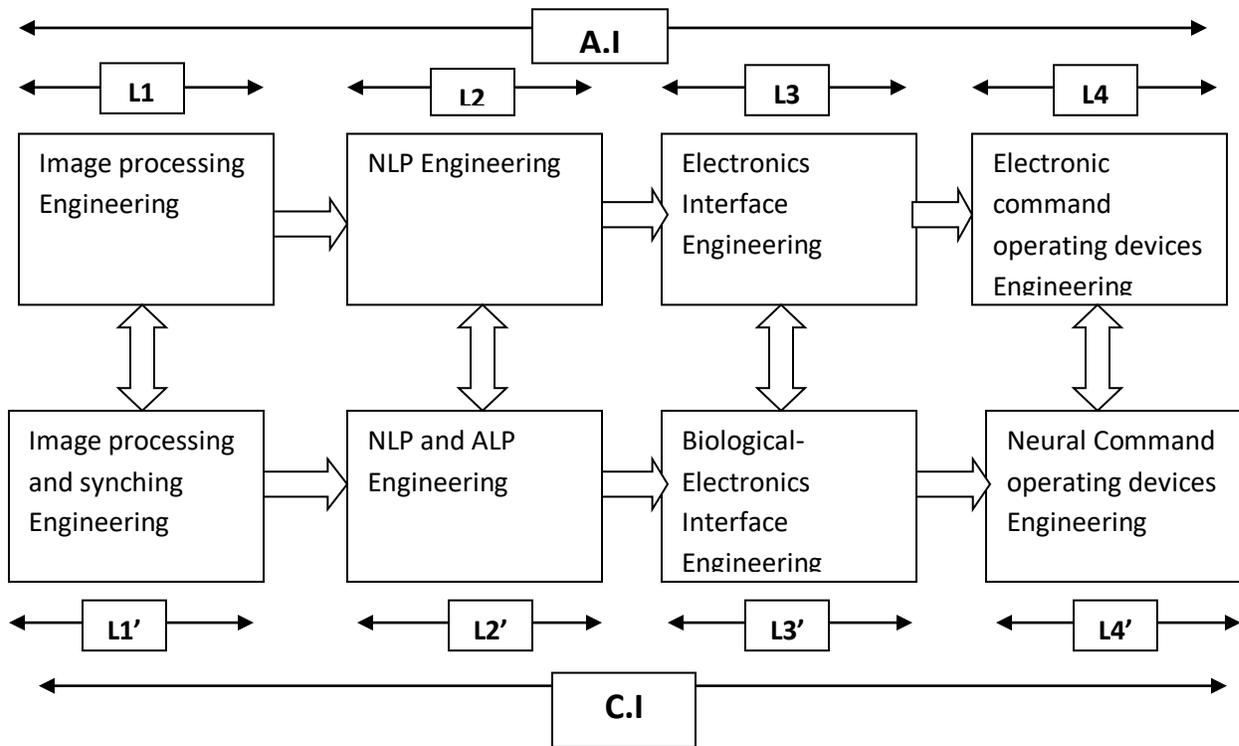
Parallel Engineering Model

This is my second model labeled as “Parallel Engineering Model” when fusion of AI and CI engineering take place. As display in model two parallel tracks with four tiers Upside for AI engineering with L1, L2, L3 and L4 whereas at downside for CI engineering with L1', L2', L3' and L4' respectively. At L1 image processing engineering considered and slightly change in case of CI at L1' as image processing and biologically synching engineering need. At L2 Natural Language Processing analysis, design and development

are the issues which are extended as NLP with Artificial Language Processing (ALP) must need because not only human to computer but computer to human machine code must be encode and decode by biological brain. At L3 engineering essential is electronic interface design and simultaneously [4] at L3' Biological-Electronics interfaces design for ions-electrons command and signaling for communication. At last tier L4 in AI electronically command operating devices need to engineer but in CI at L4' Neuron

Command Operating Devices [5] NCOD need to engineer.

Figure (2): Parallel Engineering Model



Source: Prof. Md. Sadique Shaikh

Conclusion

In present communication I discussed with the help of two models how modeling and engineering shift and different from Artificial to Cyborg Intelligence with discussing engineering shift model and for fusion parallel engineering model to get insight. Cyborg Intelligence in future has huge scope and still several facts and figures remains to collect and engineer in the field. CI in future provide ability to mankind to survive and live in space and travel for different planets as shown in Hollywood movies but still need lots of research in the domain of CI.

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