

Use of A.I. Technologies for V.I.C.T.O.R.

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Abstract - For increasing workloads and pressure, a smart assistant is a thing everyone wants from the field of technology. The need for an intelligence that can help us in developing new platforms for development and carrying out a massive amount of work is felt commonly by many individuals. So in order to come over with this problem and to take the technology to the very next level, we innovates the idea of building a computer-based AI that can fulfill all desires. In order to deliver what is desired in V.I.C.T.O.R., a development of Human Intelligence is to be done with clear and logical reasoning to the problems by undertaking every exception and error which can ever occur. To do those kinds of function and exception handling, several types of artificial technologies will be used to deliver different types of tasks and work-types. So, in order to implement every type of tasks like Producing text from computer data, Speech Recognition, efficiently run AI-oriented computational, Decision Management, etc., various kinds of technologies will be used are described and have been classified for the better study.

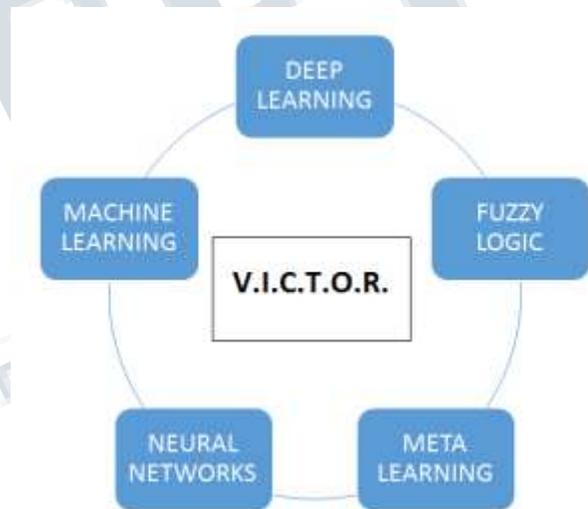
Keywords: Artificial Intelligence, Super-Intelligence, Humanoid computer Intelligence, real-time decision system.

INTRODUCTION

V.I.C.T.O.R. (VIRTUAL INTELLIGENCE CREATED for TRAINED and OBSERVED RESPONSE) is a highly advanced computerized AI that will fulfill every need of the user related to technology. Designed with fast efficiency and real-time response with high processing voice translations, V.I.C.T.O.R. is an operating system that can multitask, schedule, operate and perform in order to bring the maximum comfort level in the work of its user. With an advance interface of speech to speech communication, V.I.C.T.O.R. can be essential to use every technology around and the operating system works. Depending upon the prior needs of the user, the AI used in development can communicate in a natural language of the user and can help in performing user’s tasks in order to maintain the level of ease in the work.

With advancement in consciousness and balanced response, this can help us in order to perform everyday tasks without letting anything miss and can also develop a reasonable and logical information system to cope up with every need of the user according to the environment.

But in today’s world, many recent developments have been made in AI that have been remarked by very advancements is the same field. So, in order to develop V.I.C.T.O.R., many of the technologies will be used which will perform different types of functions and tasks. These technologies have been classified into different types by this diagram:



Diagrammatic structure of the technologies used in victor

These are the following types of technologies which will be used in developing V.I.C.T.O.R. The implementation of the following technologies will be discussed in further papers, but not it is better to understand the technologies in order to use the precisely in order for betterment.

MACHINE LEARNING

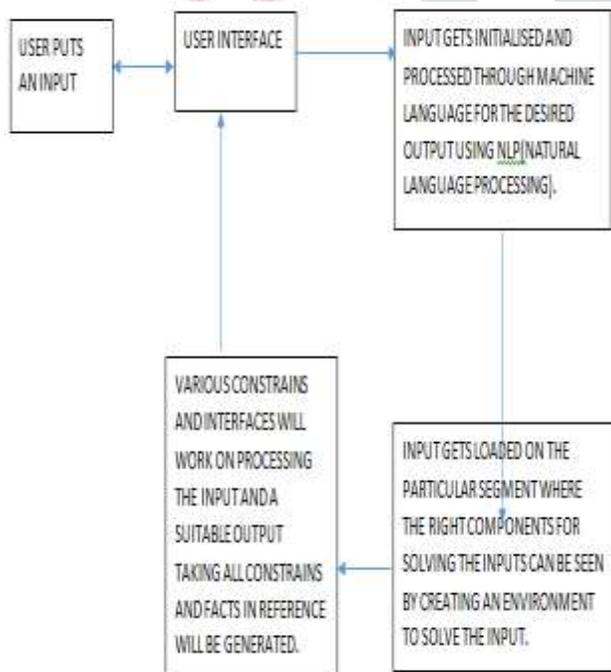
Machine learning is a field of computer science that gives computers the ability to learn without being explicitly programmed. It is differentiated into Supervised and Unsupervised learning, based upon the output it

generates. Though these two types of learning are equally important in generating several types of outputs in the real-time analysis, it is a major technology to be used in designing V.I.C.T.O.R. to deploy as a real time super-intelligence.

• APPLICATION IN V.I.C.T.O.R.

Though machine learning will provide the platform where the roots of the V.I.C.T.O.R. will be at deepest, it will be a tool which will be used to design the concepts of the humanoid brain inside the machine. By this tools, we will be able to develop various interfaces for which the respond system of the V.I.C.T.O.R. will be designed. Machine learning will be used for Automated theorem proving by which the main core of logistics of the working patterns and procedures of V.I.C.T.O.R. will get deployed. Besides this, several brain-machine interfaces will also be developed through machine learning and natural language processing(NLP).

Other features of machine learning will perform Brain-machine interfaces, Computational anatomy, Computer vision, including object recognition, Translation, Speech and handwriting recognition, Natural language processing and Natural language understanding.

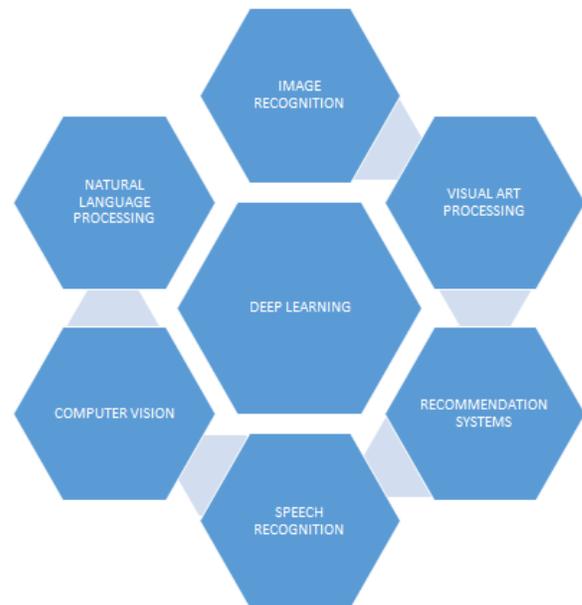


WORKING OF MACHINE LEARNING IN V.I.C.T.O.R.

DEEP LEARNING

Deep Learning will provide us an architecture which will be required to make the brain of the V.I.C.T.O.R. adapt about the knowledge and the ability to analyze and predict a solution for the same. Though it can be supervised, unsupervised and partial supervised, all of the schemas will be used to maintaining the knowledge base system and decision support system in the architecture.

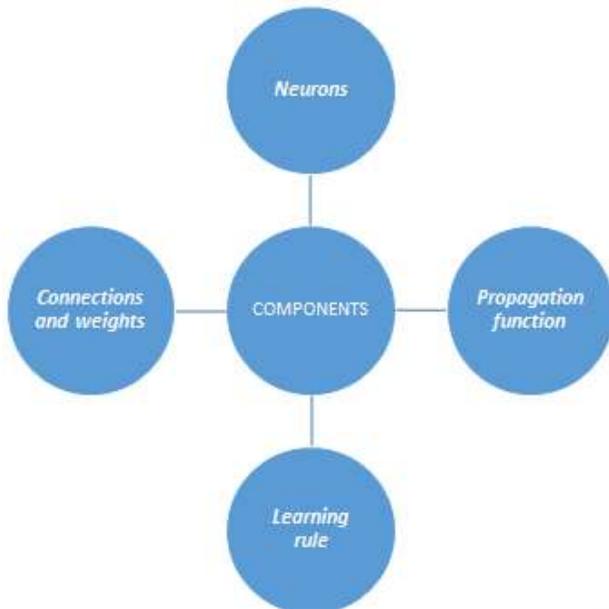
Deep learning will provide us an architecture for performing various tasks in V.I.C.T.O.R. such as deep neural networks, speech recognition, deep belief networks and recurrent neural networks have been applied to fields including computer vision, natural language processing, social network filtering, machine Translation, audio recognition and bioinformatics.



APPLICATION OF DEEP LEARNING IN V.I.C.T.O.R.

NEURAL NETWORKS

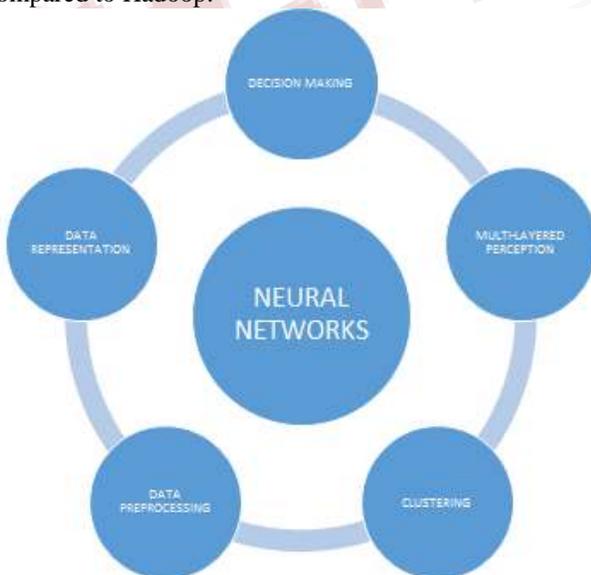
Artificial neural networks are computing systems inspired by the biological neural networks that constitute animal brains. Such systems learn (progressively improve performance) to do tasks by considering examples, generally without task-specific programming.



COMPONENTS OF NEURAL NETWORKS

• APPLICATION IN V.I.C.T.O.R.

Neural networks in V.I.C.T.O.R. will be used to process data items and help the decision making process to make efficient and faster decisions in real world problems. Besides this, Several multi-layered perceptions will be given using the neural network for determining the gravity of a task. Also, neural networks will also be used in clustering of data items, similar but advanced types as compared to Hadoop.



FUZZY LOGIC

Fuzzy logic will be used in order to process the unsupervised learning in the decision support system of the V.I.C.T.O.R. where there is no definite output of a particular task. They will be used to provide the user an acceptable reasoning for a desired task which is based on a real world problem. It will be a prediction to the uncertainty of the task.

The main advantage of using fuzzy logic will be that it will help in taking imprecise and fluctuating input in the system to generate a suitable output for the same.

FUTURE WORK

These are the various types AI technologies which will be used in developing V.I.C.T.O.R. which will serve their unique functions in the whole mechanism. This included the theoretical knowledge of the technologies used in developing the systems. The main application of this type of frameworks will help us to overcome real live problems easily with suggesting Artificial mind to resolve real time and real lives problems. Once creating an operating system for computers, V.I.C.T.O.R. platforms for mobiles and tablets can also be developed in order to synchronize mobiles, desktops and tablets for efficient usage. Customized V.I.C.T.O.R. can also be deployed according to one's own personal need. Also, this can also be used in Government organisations like ISRO (Indian space research organisations), NASA, RAW and other agencies to bring their work to ease.

Further implementations, researches, exceptions and other aspects of this topic will be discussed in the various upcoming papers to explain full featuring the working mechanisms of V.I.C.T.O.R.

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RESEARCH SYNOPSIS FOR V.I.C.T.O.R. – Previous research by Ms. Gurminder Kaur and Ishan Anand