Ethical agent Implentation
Towards Situation Oriented Analysis

G.Yogendran, M.Sindhu

Abstract—An ethical agent orientation approach in dealing with situations that are needed to give a win-win situation that are not directly conveyed to the particular beneficiary but via ideas and motivation that need to boost up his/her talents to get that situation a success which differs from the current approach in making the agent to achieve a goal without even considering the negative aspects that follows. So a necessary concern needs to be injected to the agent which clears the air that proves no destruction.An empathetical agent who have the concern for humanity and nature that would need to suggest and motivate its goal to happen only by convincing and not by forcing which will obtain sustainability.

Keywords:-ethical agent, empatheticalagent, sustainability

I. INTRODUCTION

Artificial Intelligence is a branch of Science which deals with helping machines find solutions to complex problems in a more human-like fashion. This generally involves borrowing characteristics from human intelligence, and applying them as algorithms in a computer friendly way. A more or less flexible or efficient approach can be taken depending on the requirements established, which influences how artificial the intelligent behavior appears.

Computers are fundamentally well suited to performing mechanical computations, using fixed programmed rules. This allows artificial machines to perform simple monotonous tasks efficiently and reliably, which humans are ill-suited to. For more complex problems, things get more difficult... Unlike humans, computers have trouble understanding specific situations, and adapting to new situations. Artificial Intelligence aims to improve machine behavior in tackling such complex tasks.

Together with this, much of AI research is allowing us to understand our intelligent behavior. Humans have an interesting approach to problem-solving, based on abstract thought, high-level deliberative reasoning and pattern recognition. Artificial Intelligence can help understand this process by recreating it, then potentially enabling us to enhance it beyond our current capabilities.

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There are many different approaches to Artificial Intelligence, none of which are either completely right or wrong. Some are obviously more suited than others in some cases, but any working alternative can be defended. Over the years, trends have emerged based on the state of mind of influencial researchers, funding opportunities as well as available computer hardware.

Over the past five decades, AI research has mostly been focusing on solving specific problems. Numerous solutions have been devised and improved to do so efficiently and reliably. This explains why the field of Artificial Intelligence is split into many branches, ranging from Pattern Recognition to Artificial Life, including Evolutionary Computation and Planning.

AI is generally associated with Computer Science, but it has many important links with other fields such as Maths, Psychology, Cognition, Biology and Philosophy, among many others. Our ability to combine knowledge from all these fields will ultimately benefit our progress in the quest of creating an intelligent artificial being.

The potential applications of Artificial Intelligence are abundant. They stretch from the military for autonomous control and target identification, to the entertainment industry for computer games and robotic pets. Lets also not forget big establishments dealing with huge amounts of information such as hospitals, banks and insurances, who can use AI to predict customer behaviour and detect trends.

As you may expect, the business of Artificial Intelligence is becoming one of the major driving forces for research. With an ever growing market to satisfy, there's plenty of room for more personel. So if you know what you're doing, there's plenty of money to be made from interested big companies!

II. RELATED WORKS

Artificial intelligence is a topic which gives immense amount of opportunities to think and to replicate in the real world. Since there is a need of human to minimize his own work and to do things that he can't do because of the risk factor that involved, he developed a replica to do these works. The current world human have a thought of running behind the success and not looking at the people around them. the inventions have been more but the care for others have gone less, the thinking of oneself has been more but the thinking towards the well being of others have been less. The thought of human is have been so high in making money rather the

thought must have gone in a healthier ways to educate, peace and love. the world had made us from walking through our life to running and even flying through our life.hence the life expectancy have become less and the pressure ,problems,depression,loneliness have conquered and defeating us day by day. So the humans don't have anytime to spend to themselves or towards the neighbour or concerning about nature world. Technology plays the major reason behind destruction , hatred , enemity so hence making use with the same technology ,retrieving the attitude from our past ,and the inventions made by them with the primary concerns towards only the betterment of the people and conserving the natural resources without destruction of the peace and prosperity of the people and the place on which we live.

III. GOAL OF PROPOSED AI

The main goal of my proposed agent is like a pet which talks, cares and understands what state of mind we are.A care taker has qualities of empathy (which doesn't look for its benefit).Look, observe, retrieve, apply, analyze, learn, store and repeat are the step that are procedurely followed inorder to perfom any task in the environment. Acts as an emotionally responsive agent.Acts as a confidence booster

A The activity done by the proposed agent:

This agent would go in for various stages in performing any task towards success in a ethical way. Hence the following are the ways through which this performing thing would be done.

Fig 1: steps involved in proposed ethical way

Any situation will be dealt with these steps in performing any task.first the agent would look a situation and constantly observe the situation then it would retrieve any similar event in knowledge base and then it would apply things listed in knowledge base then it would analyze the reaction happened after applying if it has the ethical success then ok else it would learn what went wrong and update itself with the analyzation then repeat the task till it gets the ethical success.but the primary part remains that no compromising on ethical issues.

A. SITUATIONAL ASSERTION

Preparing for an interview,he s tensed, hence the state of mind needs to be changed.so the agent scans his positive and negatives and match with the positive and the negative of the competeters and scans with the positives and negatives of the interviewer.he comes to a mathematical calculation in percentage.A->B->C

IF A>B AND A>C THEN
A GETS SELECTED
IF A>B BUT A<C THEN
A DOESN'T GET SELECTED
IF A<B DEFAULTLY
A DOESN'T GET SELECT AT ALL.

ALGORITHM[1]

Function best(KB,goal,0)returns Q1 or failure
KB = Knowledge base
0 = current situation
Q1→SUBST(0,A(KB))
Q2→SUBST(0,B(KB))
Q3→SUBST(0,C(KB))
If goal is empty return 0;
If (Q1>Q2&&Q1>Q3)==goal
Q1 is selected
Else if (Q1>Q2&&Q1<Q3)
Q1 may get selected
Else if (Q1<Q2)
Q1 will not get selected
.

A normal agent would give us such a result with its analysis to the situation. But the the proposed aget would not only analyse but also give the solution for the situation.

SOLUTION

If (Q1>Q2&&Q1>Q3)==goal
Q1 IS SELECTED
Else if (Q1>Q2&&Q1<Q3)
Q1 may get selected
{
While(Q1<Q3)
{
Q1++;(KB->increment of positive)
Q3--;(KB->decrement of positive using his negatives)
}
}
Q1 GET SELECTED
Else if(Q1<Q2&&Q1<Q3)
{
While (Q1<Q2&&Q<Q3)
{
Q1++;
Q2--;
Q3--;

Q1 GETS SELECTED.
So, hence the proposed agent will analyze the positives and negative of Q1,Q2 and Q3,will not the say the result to the user but will make up the user in a way that Q1 will succeed but encouraging the users positives and preaching the negatives about Q2 and Q3 to win the situation. Hence there is this WIN – WIN –WIN situation.

Similarly, if supposing an agent is always with us and satisfies what we want mentally will make us happy and in turn we will make our neighbors happy in turn the will make their neighbors happy .

B. SITUATIONAL ASSERTION 2

A boy waits for her girlfriend and he want her to appreciate the work he has done. But the girl jus says congrats and says she got work and leaves ….

Function best(KB,goal,0)returns Q1 happy or failed happy[1]

KB = Knowledge base
0 = current situation
<-> means MEETS
 <-->means expectation fulfilled
Q1→SUBST(0,A(KB))
Q2→SUBST(0,B(KB))
Q3→SUBST(0,C(KB))
Q4→SUBST(0,D(KB))
Q5→SUBST(0,E(KB))
Q6→SUBST(0,F(KB))
Q7→SUBST(0,G(KB))
IF Q1 <->Q2 AND Q2<-->Q1Q1 FEELS HAPPY THEN
Q1<->Q3 THEN Q3<->(Q4,Q5,Q6,Q7)
SO Q3 Q4 Q5 AND Q6 FEELS HAPPY
IF Q1<->Q2 AND Q2</-->Q1((</--> means expectation not fulfilled))
Q1 FAILS HAPPY THEN
Q1</->Q3 THEN Q3</->(Q4,Q5,Q6,Q7)

HENCE Q1,Q3,Q4,Q5,Q6, FAILS HAPPY SO IT MAKES A FEEL BAD INTURN AFFECTS Q3 THEN TO Q4 AND TO Q5 AND TO Q6.THIS WILL BE A CHAIN AND CREATES A FAILED HAPPY IN A CHAIN.

hence we have this agent scans what a wants and gives it emotionally and satisfies what he want and hence will make a failed happy to a succeced happy.

C. DEMAND AND SUPPLY (LIMITATIONS AND NESSACITY SUPPLY)

This concept plays a key role in dealing with the situation event. Normally we don't get satisfied with what we need and what we got.coz our need get satisfied depends upon the source were we expect. Hence if it doesn't come from where we need then it is not possible to satisfy once need. So a mere replica of what we expect from the source may not fullfill or satisfy but an additional extra efforts needed too satisfy. So the limitations and the supply i.e the demand and the supply should be accurate

D. SITUATIONAL ASSERTION 3

Mind[6] plays a key role in one creation and destruction of thinking which also determines the richness in thinking ,quality and quantity of thinking varies with a mind which is in a peace state   and   which surrounded with problems.sometimes we always wonder something always runs through our mind like a virus which disturbs all our creation .the main issue here is that we actually don't know what the problem is and we always wonder what happen to us wen we know there is nothing to worry but we still go through a state of mind which makes us worry more by thinking what we worry for hence this is because there may be an instance or some thing a little which is unfullfilled in the subconscious which is not fully satisfied or something to which we may have compremised with so the mind keeps on worrying for something with no idea of what actually the problem is all about.this problem is solved or relieved wen that subconscious need is satisfied under any situation.then we kind of have a relieved state which gives us a flow of state were we actually feel much better.

Hence finding this is a challenge because this problem of unstaisfaction in one subconscious mind may happened a day back or a month or a year or even at childhood stage of a person. So finding it would take an enormous searching operation. (1)

Function best (KB, goal, 0) return mind creative or destructive[1]
KB =Knowledge Base
0=current situation
Repeat until mind is creative
If M1 = P
{
KB++;
}
Else if (M1</->P)
{
KB--;
}
Else if
Return 0;
Solution:
Function best (KB, goal, 0) returnsM1 search negativity or failure.
KB is knowledge base
0 is current situation
If M1</->P>
Then start s' (s'->search operation)
For s' scans negativity N
From moment current c towards past p.
If s' find N between C&&P
Stop and quash N
Else return 0

E. INNOVATION ASSERTION
There is the term called as sixth sense which could able to predict future of which could able to realize what the coming scene of the future. How could that be possible.i would want

to convey that humans are the best possible examples of a time machine coz they have this great equipment to travel fast is their mind and hence so mind travels back to scene which they see in the present and relating to the picture of an incident or a conversation with a person the mind travel back to the scene that happened. What is amazing is that mind not only brings us the picture or scene but also the flavor that happened for example if we have met an old friend after a long time and went to coffee house and had a cup of coffee and chat with him for some time and left. What is interesting to note is that when we look at the coffee house we immediately go back to that scene of meeting our friend and having a cup of coffee and we also remember the conversation .the best part is that we could d also remember the taste and smell of that coffee that we shared. So how amazing is our brain. Similarly we also have the prediction of future

When we get a call or a text message the amazing part is we could guess the person who is texting or calling to us, and sometimes we tend to guess what message that has been sent and also what is the person aiming to tell us via phone .we could say this also a time machine. which is an indication to say that human can think past and future .but all humans cant and while we could able to sense about our past but can't predict our future quickly why?.

this is because we are all stuffed with day today problems and our life constraints don't give us space to think outside our daily issues since mind takes most of its ability to concentrate on our day to day activities and if at all we have some time we take those precious energy to think for our future or worry about our past. And the commitment we have like family relationships friendship work place makes a constant connectivity from dawn to dusk. So if we want to attain such kinds of sixth scene there are two ways one is break all the connectivity or never worry for those connective parameters. If that happens the mind is free and so the thinking about prediction becomes very intense and the we could able to achieve such status.

IV. ETHICAL ANALYZATION AND ITS IMPLEMENTATION[3]

For this I have to revisit our mythology to give a good example ,Indian epics called as Mahabharata and Ramayana were the ethical issues have be strongly addressed. Let me take two characters from Ramayana and Mahabharata

Rama and ravana from Ramayana(3) and Krishna and dhuriyodhana from mahabharatha.i am gonna introduce these characters in a brief rama a righteous king he always follows rules and always follows principles.on the other hand ravana who never follows the rules and never follows the principles .coming to the mahabharatha Krishna[3]
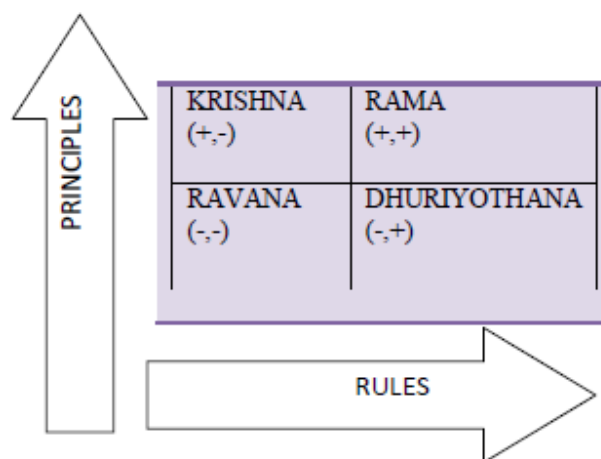

Fig 2:[5] Representation of various human behaviour

Follows[4] only principles where as never followed the rules.at last dhuriyothana who constantly states rules for his benefit but never the principles.[4]

Rama follows both principles and not rules
Rama (x) => follows (rules,principles)
Krishna only follows principles but not rules
Krishna (y)=> follows (7rules,principles)
Dhuriyothana follows only rules but not principles
Dhuriyothana (z)=> follows (rules,7principles)
Ravana follows no rules and no principles
Ravana (A)=> follows (7rules^7principles)

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The above example states the different ways by which human exits dealing with the rules and the principles,hence by stating the issues concerning towards the safety and the security of the human and nature an universal law for artificial agent have to be proclaimed towards following rules and principles in reacting or monitioring or updating its knowledge base.

V. CONCLUSION

To conclude I would like to pronounce the set of rules which need to be framed for the betterment of the mankind and nature. Framing the principles place the main role, the principles and the rules should be balanced which our human often fails .so the future of our world is the emergence and widely used artificial agents so the constraints need to be set so that the agents would have a friendly approach and a friendly environment to move. This friendly nature would give the humans to love, like, share and spread peace which conserve nature and mankind.

REFERENCES

[1] Artificial intelligence – A modern approach –Stuart Russell and Peter Norving

[2] Evolution, Sociobiology, and the Future of Artificial Intelligence- David L. Waltz, Columbia University
http://www.computer.org/portal/web/computingnow/intelligentsystems

[3] Ramayana-the epic of india-kambar and valmiki

[4] Mahabharath-the epic of india-vyasakar

[5] Buisness sutra- by Dr. Devdutt Pattanaik, Chief Belief Officer of the Future Group

[6] conversation with Suba ,Interactions with Mikito and Observations from our envioronment.

[7] American Association for Artificial Intelligence (AAAI), Welcome to AI Topics, 2003, http://www.aaai.org/AITopics/ -- a Web-based library of introductory information about various areas of artificial intelligence; altogether, a resource with links to hundreds (thousands?) of sites, organized by an easy-to-use, interactive index.

[8] George Luger, Artificial Intelligence: Structures and Strategies for Complex Problem Solving, Fourth Edition Addison-Wesley, 2002 -- a well-respected introduction to artificial intelligence, as witnessed by its being in its fourth edition.

[9] Peter Norvig, AI on the Web, http://aima.cs.berkeley.edu/ai.html -- a list of over 800 links on various aspects of artificial intelligence.

[10] Nils J. Nilsson, Artificial Intelligence: A New Synthesis, Morgan Kaufmann Publishers, 1998 -- another fine introductory textbook on artificial intelligence.

[11] Stuart Russell and Peter Norvig, Artificial Intelligence: A Modern Approach, Second Edition, Prentice-Hall, 2003 -- the leading introductory textbook in the field.

[12]American Association for Artificial Intelligence, Expert Systems, http://www.aaai.org/AITopics/html/expert.html -- an on-line index of materials, including tutorials on the subject. Highly recommended as a starting point for readings on the subject.

[13] Virginia Barker and Dennis O'Connor "Expert Systems for Configuration at Digital: XCON and Beyond", Communications of the ACM, Volume 32, Number 3, March 1989, pp. 298-317.

[14] Daniel Bobrow et al, "Expert Systems: Perils and Promise", Volume 29, Number 9, September 1986, pp. 880-894.

[15] Joseph Giarratano and Gary Riley, Expert Systems: Principles and Programming, Third Edition Brooks/Cole Publishers, 1998.

[16] Frederick Hayes-Roth, "The Knowledge-Based Expert System: A Tutorial", IEEE Computer, Volume 18, Number 9, September 1984, pp. 11-28.

[17] Frederick Hayes-Roth, "Rule-Based Systems", Communications of the ACM, Volume 28, Number 9, September 1985, pp. 921-932.

[18] Peter Jackson, Introduction to Expert Systems, Third Edition, Addison-Wesley, 1998.

[19] Gary Riley, CLIPS: A Tool for Building Expert Systems, 2002. (a Web site that provides software and support for building expert systems; the software is based in standard C for portability)

[20] Scandia National Laboratories, Jess: the Rule Engine for the Java Platform, 2003. (a Java-based expert system and environment, originally based on CLIPS)

[21] Henry Walker, Vikram Subramaniam, and Ivan Sykes, "An Expert System to Place Incoming Students in Math and CS Classes", Journal of Computer Science Education, Volume 3, Number 3, 1992, pp. 223-232.