

Solving Global Problems using Neural Network

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Received: August 30, 2021; **Published:** September 01, 2021

Introduction

Human Brain is made up of interconnected cells called neurons. The connection between these neurons is called neural network. Thoughts are created by interconnected brain cells called neural network. It is the result of hidden data and input data. If suffering, then it is because there is something wrong in your hidden data. Take good input data that will override the hidden data to create good thoughts. Artificial neural network is the pattern to work like the human neural network.

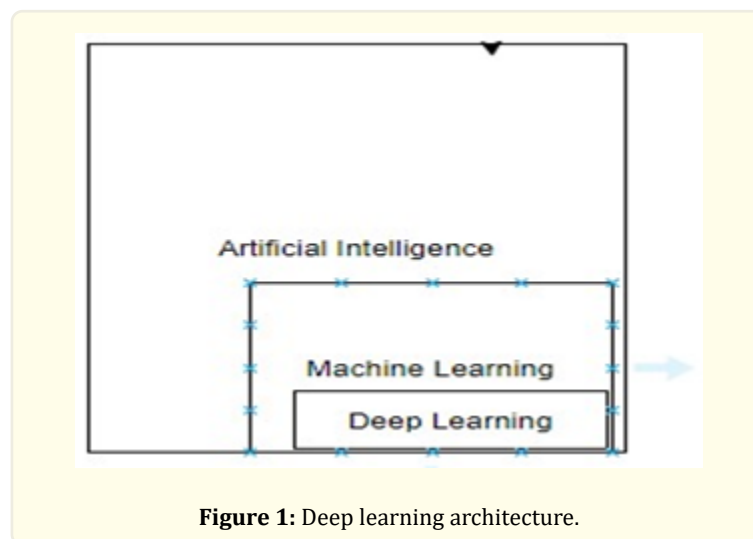


Figure 1: Deep learning architecture.

There are various methods used to reduce problems. This paper describes various types of neural network models like natural language processing, Convolutional neural network, and deep learning. It also describes supporting models like machine learning and parallel computing. The paper also highlights the importance of security in the computation. The main objective of this paper is to study variety of models and make a relative study of them to understand their advantages and disadvantages to Implement them to solve the problems that we are dealing today.

Keywords: Neural Network; Computational Neural Network; Mobile Computing; Infrastructure Cloud; secure computing

Problems

The various problems that the world is facing right now of importance can be divided into independent units called sections. The most important sections are as follows:

- Food and Water Security

- Unemployment
- Climate Change
- Large Scale Wars/Wars
- Religious Conflict

Food and Water Scarcity

There are millions of people who faces this issue every day and many lose their life due to this. To know the user requirements and main emphasis is on what is needed from the system. The problem is very severe that millions of people are dealing every day. To solve this requires great level of human understanding.

Unemployment and economic crisis

This are where the human is going into poverty and addiction. The research tells that more than millions of people get into mental and psychological crisis because of financial crisis. The people who are addicted to drugs and live an unhealthy life because of stress are very staggering in number. The specification is transformed into a structured way of solving a complex problem.

Climate Change

The climate is one of the most important problem which the world is dealing with right now. This is where many scientist and researcher are putting their time and energy because we know the effect it will have will put the lives of the future generation in danger. The danger is unavoidable, but the measure can create the awareness which will create effective solution to this problem.

Religious Conflict

Every Knowledge has its own followers, and every knowledge has reasons and manifestation. There are many people killed based on religion and belief. The are many religions but every follower are looking for truth not the religion. When they see that belief is challenged, they get angry and violent. The stronger the belief, the greater the disappointed. This is where the emotions are being distributed to end users who are responsible for using it. The basic questions include:

1. Who is God?
2. What happens to life after death?
3. Why are we created?
4. How long is the human life?
5. Why to believe in God when we cannot see him?
6. If there is no God, who created this world and Why?

These are few questions where the focus is being put forward and if we need to come to common and logical reasons, we need to find the proof and evidence to these important questions. Human minds are not capable of solving these questions and so we need super intelligence and god like feature to solve. It is important to solve because the purpose of life is dependent on that. Why are we in this world is an important question to know.

Solution

This section describes the solution of various traditional and contemporary problems using neural network models. The architecture of the model is as follows:

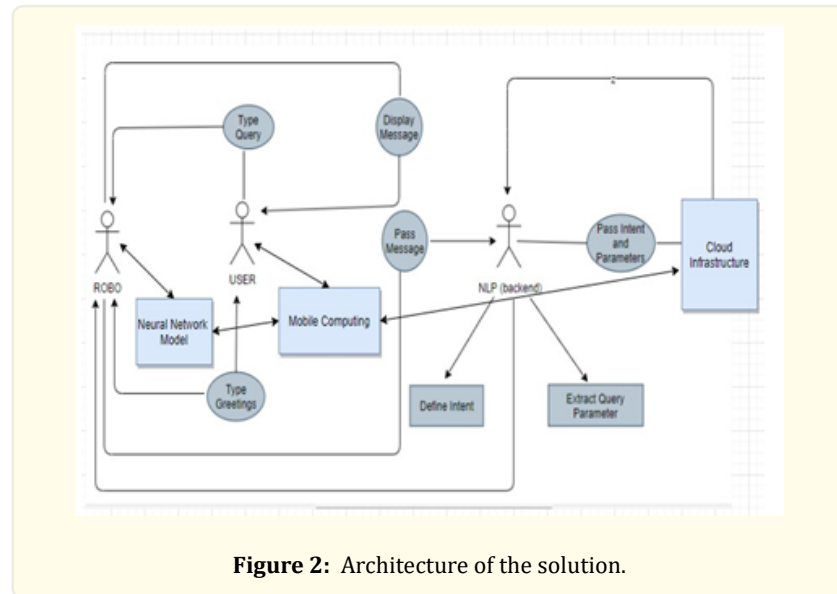


Figure 2: Architecture of the solution.

The user interacts with the neural network model and provide learning for the neurons through the neural network model. The neural network then pass message to the nlp backend which then interacts with the parameter to get an appropriate response and provide feedback that can allow to solve the problems on a global level.

Convolutional Neural Network

CNN are one of the most effective method for image recognition and Image Classification. It can be used to analyze the food required by someone. The amount of food wasted is very much more than the food required for people starving. Saving the food to allow it to be reach to the right people can reduce food scarcity but for that it should track the food required.

Main features:

- Easy to understand.
- Well defined phases and their implementation.
- No previous data lost
- Less to no human involvement in this pattern.
- Image recognition and classification will allow to solve the food and resources required by any human and will notify the food bank about the requirement.

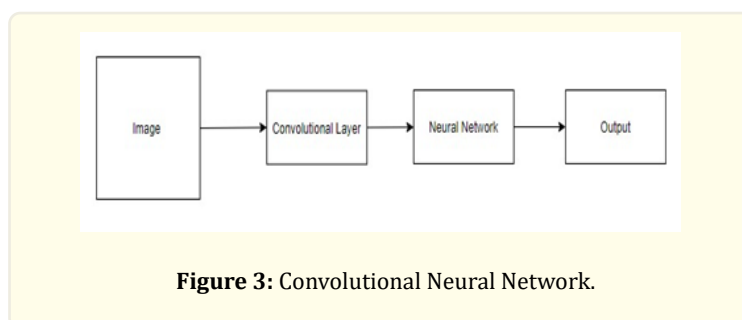


Figure 3: Convolutional Neural Network.

Natural Language Processing

This model is the most widely used Machine learning model. It allows to extract the text that we are looking for. For example, if we have a movie database then the nlp backend will look for specific movie name or cast or year or any query which is assigned to use in the database. Here testing is done at each stage and the user is given the output like the chatbot to get information about the user.

Main features:

- Easy to understand.
- Easy to Implement.
- Human Like Interaction.
- High success rate and easy learning method.
- Focus on the important and key terms that are relevant to save time.
- It is also used to control online hate crimes, absurdity, and threats with specific words. For example, using the word suicide can be taken as a threat to the individual.

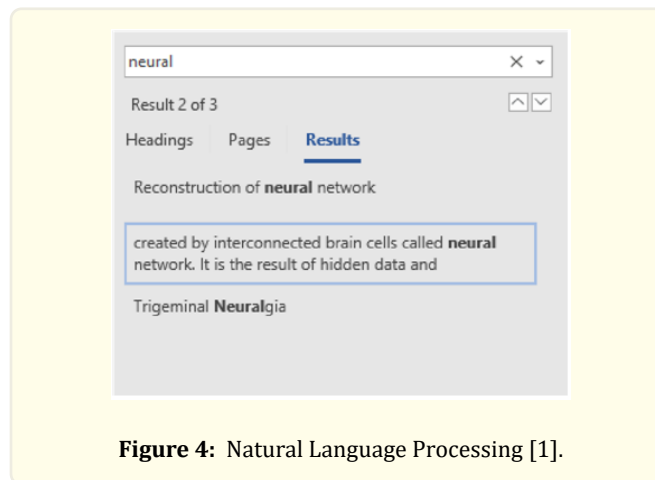


Figure 4: Natural Language Processing [1].

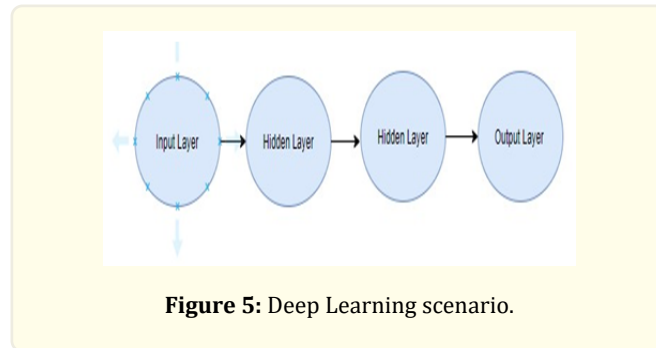
In the above figure the word neural is searched in the text and everything else is ignored and so the word is highlighted to give the best possible result according to the search.

Deep Neural Network

DNN model is combination of attributes of iteration from two layers of complexity. It can be used to forecast climate change trends and understanding the trends from the graphical representation of data.

Main features:

- Very deep learning models which can increase the threat to security but if model properly it can increase security.
- It can help in deep layered platforms where it is not possible to get understanding with the convolutional neural network.
- It can help to keep track of the conflicts and look for an effective way to end the war.
- War between the Israel and Palestine can be solved if the data is understood that can tell which land belongs to which person and the new agreement can be passed to follow because of this rational reason rather than the emotion.
- Cost can be reduced because every country spends millions in arms and ammunition which cause threat to the society. So much amount of money is spending in war and ammunition which instead can be spend on the economy and poverty to raise the GDP and be among the happiest nation and make a happy world.

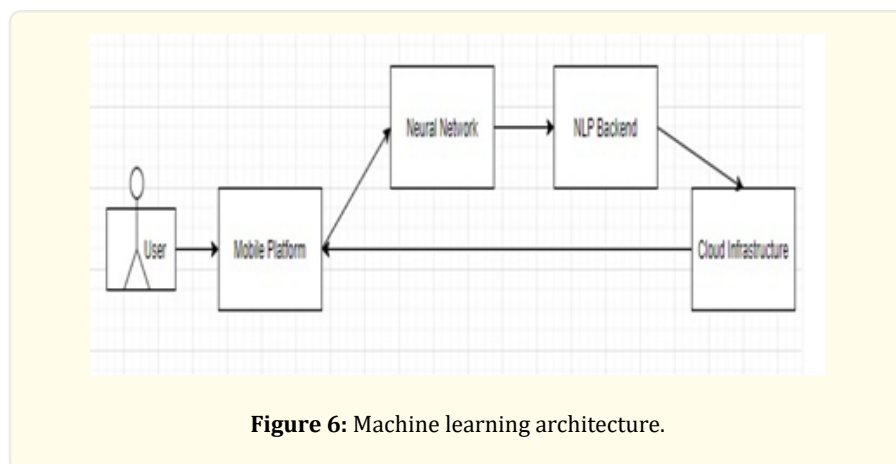


Machine learning to provide employment

There are people who do not want to eat the leftover food, leftover or used clothes and so look for employment to provide these necessities to them. When they do not get it, they lose their confidence. It is important to understand the skills expectation. There are many job providing platforms, but they do not have the knack to provide employment to everyone and even if they are providing many, they are not providing financial security. There are many people who apply to a job but only few get that, and many do not get. It is important to model opportunity and financial security to everyone. Many companies use machine learning algorithm to reduce the number of candidates, but it does not uses algorithm to provide for all candidates. Using this feature to provide for all candidate an appropriate opportunity.

Main features:

- Reduce the risk of economical disturbance.
- Focus on more good interactions and the successful processes.
- The Flexibility is enough to track to job availability and support.



Mobile computing to track problems

Designing an app specially to keep track of all these problems with list of food required, water hydration level of the body. Monitoring and updating the temperature trends of all the regions in the world. The fingerprint access to the phones will provide data for neural network. The access will be very vital in understanding their verification and health. The track of health and human life will allow them to get access to the required resources.

The engagement will be difficult to get but the enforcement of it as a law would be a success.

Novelty

Current problems need call for a new solution. Neural network model is being used but the right approach is being missing to solve these problems affectively. The new element is the use of mobile computing with neural network in a cloud based database like the AWS but on a global platform requires more research and to proceed with the technical part of data science and the management of data in the cloud infrastructure effectively.

The data that is being provide in the neural network is limited and when too much of data is provided to the neurons they behave differently. So, the mobile computing allows the use and management of these data in a right manner. The mobile computing will allow to track the data in the infrastructure and will respond immediately to the need. The problem like the corona virus would not have been arise if the health of everyone was being monitored. It will end the conflicts by providing the solution in a global way. There are organization like the WHO but those can only serve limitedly because they do not have funding. So, using the money spend in wars and weapons on the economic and personal wellbeing of everyone Is the way that will open the routes to global wellbeing.

Feasibility

The purpose of the paper was to highlight what problems are going on in the world and what are the different ways to solve those problems. It further explains various traditional and contemporary neural network models.

It will take at least 5-10 years to see the effect because there is so much work needed to end or at least reduce the effect of problems. To deploy large scale servers, to trained neurons and to learn the requirements to train neurons is an exceptionally long and debilitating thing. We need people to sign up and engage with the app that we can serve them. Not everyone cares about those issues, so they will be forced to engage and when you are doing something that forces people to do something, you need to be ready to be hated. So, all in all the process is tuff but the problems can get severe. Passing an agreement that is accepted by every country is also difficult due to differences in many areas. Thus, if it moves forward it will face many roadblocks that will take time and process.

Conclusion

To solve these problems, it needs to be managed properly. We have different department like United Nations and when there is no accountability to the work they are not getting the motivation that can push to move them forward, mobile computing and neural network can provide a way to deal with these problems in an effective way but not without funding and resources.

We cannot reverse the effect of climate change or end war and inequality but one of the things that we can learn from life is to learn to fall because you will fall sitting and it is lot easier falling on your butt than on your face.

We are human even if we have learned something than also, we can make mistakes, but the artificial neural network can be trained to not make mistakes and proceed in the forward direction to solve these problems.

Volume 1 Issue 2 September 2021

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