

# **Introduction to Manmade Brainpower (Artificial Intelligence) with its utilization in Distinctive Areas, Advantages & Disadvantages**

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## **ABSTRACT**

*Later on, savvy (intelligent) machines will supplant or upgrade human abilities in numerous regions. Simulated understanding is the insight displayed by machines or programming. It is a category under the branch of software engineering. AI in the last two decades has significantly moved forward execution of the assembling and administration frameworks. Study in the region of computerized reasoning has offered ascend to the quickly developing innovation known as master framework. Application regions of AI is having an immense effect on various aspects of life as master framework is generally utilized nowadays to take control of the unpredictable issues in different zones as science, designing, business, medication, climate gauging. The zones utilizing the innovation of AI have seen an expansion in the quality and effectiveness. This paper gives an analysis of this innovation and the application regions of this innovation with its advantages & disadvantages. This paper will likewise investigate the present utilize of AI advancements in the PSS configuration to sodden the power oscillations caused by interferences, in System Intrusion for securing PC, in the therapeutic area medicine, to enhance healing centre inpatient mind, for medicinal picture arrangement, in the bookkeeping databases and creation and playing of PC games.*

## **I. INTRODUCTION**

It is asserted that Manmade Brainpower is acting an expanding part in the exploration of management science, operational research territories. Insight is regularly advised as the capacity to collect data and cause about information to take control of complex issues. In the close Future savvy machines will supplant human abilities in numerous areas. AI is the study and advancements of clever machines and programming that can reason, learn, accumulate information, convey, control and see the items. John McCarthy authored the term in 1956 as branch of PC science worried about influencing PCs to carry on like people. It is the examination of the calculation that makes it conceivable to see cause and behave. Artificial Intelligence is unique in connection to brain research since it accentuation on calculation and is unique in connection to Computer Science as a result of its accentuation on discernment, thinking and activity. It makes machines smarter and more helpful.

It work under the assistance of simulated neurons (manufactured neural network) and logical hypotheses (if then explanations and logics). AI technologies have developed up to an extinct in offering genuine down to earth benefits in a large number of their uses. Main AI territories are master Systems, Derived Language Processing, Dialect Comprehension, Robotics and afferent Systems, Computer View and Scene awareness, Quick Computer- Helped Instruction, Visual Computing. From these Expert Framework is a quickly developing innovation which has a tremendous effect on various aspects of life. The different procedures connected in AI are neural network, Fuzzy Logic, Evolutionary Computing, and Hybrid AI [9].

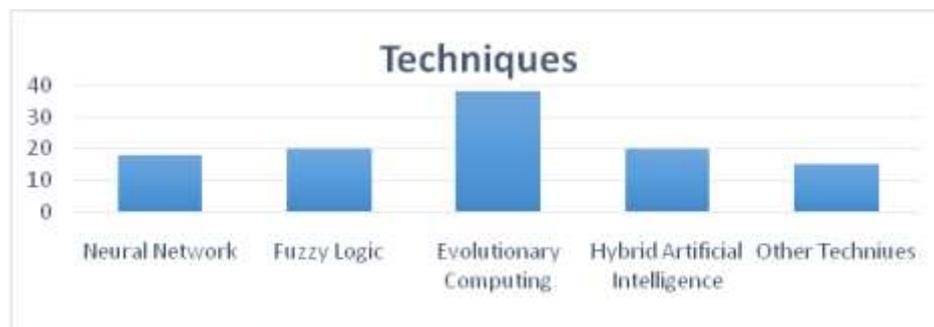


Fig 1: Papers published on various AI Techniques used [9]

Counterfeit consciousness has the points of interest over the normal insight because it is more changeless, reliable, and more affordable, has the simplicity of duplication and scattering, can be recorded and can perform certain undertakings substantially quicker and superior to the human.

The Turing Test Approach: It was invented by Alan Turing (1950) [5]. This test was intended to test that whether a specific machine can analyse or not. The test includes a human investigative specialist who interfaces with a human and with a machine and needs to tell who is human also, which one is machine. The computer breezes through the exam if a cross examiner in the wake of suggesting some composed conversation starters, can't tell whether the composed reaction is originating from human or from the machine.

## II. AREAS OF AI USED

### 2.1 Robots

An alliance of very or the majority of the above capacities with the capacity to move over landscape and control objects.

2.1.1 Exploration

2.1.2 Transportation/Navigation

2.1.3 Industrial Automation (e.g., Process Control, Get combination work)

2.1.4 Security

2.1.5 Other (Agriculture, Fishing, Mining, Sanitation, Development, and so forth.)

2.1.6 Military

2.1.7 Household

## **2.2 Modelling:**

The capacity to build up an internal representation and set of transformation rules which can be used to anticipate the conduct and connection between some arrangement of genuine items or substances.

2.2.1 The delineation Issue for Problem Solving Frameworks

2.2.2 Reconstructing the previous systems (Economic, Sociological, Natural, Biological and so forth.)

2.2.3 Hobot World Constructing (Effective and Functional Portrayals)

## **2.3 Games:**

The capacity to acknowledge a formal arrangement of standards for games, for example, Chess, Go, Kalah, Checkers, and so on., and to translate these rules into a representation or structure which permits critical thinking and learning capacities to be used as a part of achieving a sufficient level of execution.

2.3.1 Particular Games (Chess, Go, Bridge, and so on.) [5]

## **2.4 Perception (visual):**

The capacity to examine a detected scene by relating it to an inward model which represents the living organism's "Learning of the world." The consequence of this examination is an organized arrangement of connections among entities of the scene.

2.4.1 Pattern Recognition

2.4.2 Scene Analysis

## **2.5 Learning and adaptive systems:**

The capacity to adjust conduct bagged on past experience, and to create general rules concerning the world from such encounter.

2.5.1 Cybernetics

2.5.2 Concept Formation

## **2.6 Language understanding:**

The capacity to "get it" and respond to the natural language. To translate from spoken talked dialect to a written form and to translate from one normal dialect to another common dialect.

2.6.1 Speech Understanding

2.6.2 Semantic Information Processing (Computational Phonetics)

2.6.3 Question Answering

2.6.4 Information Retrieval

2.6.5 Language Translation

### 2.7 Problem solving:

Capacity to detail an issue in a reasonable representation, to get ready for its answer and to know when new data is required and how to capture it.

2.7.1 Inference (Answer-Based Theorem Proving, Conceivable assumption and Inductive assumption)

2.7.2 Bilateral Problem Solving

2.7.3 Automated Program Writing

2.7.4 Doubtful Search

## III. APPLICATIONS OF AI

### 3.1) Application of AI Techniques in Medical Area

AI techniques have the capacity to be used in almost every branch of medical area.

3.1.1) AI in Medicine

3.1.1.1) Fuzzy Master Systems in Medicine:

Fuzzy Logic is a data handling technique that grants ambiguity what's more, consequently is especially suited to therapeutic applications. It catches and utilizes the concept of fuzziness in a computationally compelling way. The in all probability zone of application for this hypothesis lies in therapeutic diagnostics, to a lower degree, in the depiction of natural systems [13]. Fuzzy master systems utilize the structure of an arrangement of "if – then" rules for modelling.

<b>IF</b>	Change in bowel habit	<b>OR</b>	Rectal bleeding
<b>THEN</b>	Consult your doctor		

Fig 2: A typical fuzzy rule system. [10]

The systems of fuzzy logic have been explored in numerous medicinal applications. Fuzzy logic is favoured over the different strategic relapse investigation in diagnosing lung disease utilizing tumour marker profiles. Fuzzy logic is additionally used as a part of the finding of acute leukaemia and breast and pancreatic cancer, pancreatic malignancy and furthermore foresee patients' survival with breast cancer. They can likewise portray MRI pictures showing brain tumours, ultrasound pictures of the breast, ultrasound. Fuzzy logic supervisors have been planned for the organization of vasodilators in the peri-operative period to control pulse.

3.1.1.2) Transformative Calculation in Medicine:

Transformative calculation is the general term for a few computational techniques in view of normal advancement process that mirrors the system of normal choice furthermore, survival of the fittest in tackling certifiable issues. The most generally utilized type of transformative calculation for medicinal applications are

‘Genetic Algorithms’ [7]. ‘Genetic Algorithms’ in view of the normal natural advancement are the most broadly utilized type of transformative calculation for therapeutic applications. The standards of Genetic calculations have been used to foresee result in basically ill patients. MRI division of brain tumours to gauge the viability of treatment procedures is additionally done through development calculation. They have additionally been utilized as a part of electronic investigation of mammographic smaller scale calcification.

3.1.2) Using AI to Increase Hospital Inpatient Care: Clinical decision support systems (CDSS) were one of the successful applications of AI, focusing

Principally on the finding of a patient’s condition given his symptoms and demographic information [3]. Mycin a rule based master system for identifying bacteria causing diseases and suggesting anti-infection agents to treat these contaminations was produced in 1970 under crafted by CDSS for medical diagnosis. Pathfinder, which utilized Bayesian systems to help pathologists all the more precisely analyse lymph-node infections. AI has likewise been valuable for PC helped discovery of defects in medical images. Such methodologies used for the determination of various types of cancer, and inborn heart defects.

3.1.3) AI procedure for Medical Image Classification:

AI techniques are utilized for symptomatic sciences in biomedical picture grouping. Model based insightful examination and choice helped support tools are vital in medicinal imaging for computer helped conclusion and assessment. Computer aided design is useful for the radiologist who utilizes the output from an electronic investigations of medical pictures as an optional supposition in recognizing injuries, surveying degree of illness, and enhancing the exactness and consistency of radiological analysis to lessen the rate of incorrect negative cases [11].

3.1.3.1) Artificial Neural Networks Approach on Diagnostic Science:

The accompanying subsections will talk about how ANN is used for picture arrangement over ages.

3.1.3.1.1) Endoscopic Pictures:

Picture arrangement is a critical advance in CAD. In characterization of endoscopic pictures a half and half execution by advanced fuzzy inference neural system which joins fuzzy systems and Radial Basis Function (RBF) was proposed. The invention of fusion of numerous classifiers devoted to particular feature parameters with a precision of 94.28% yet RBF was answered by a quick training rate than fuzzy [12].

3.1.3.1.2) MRI Brain Tumour Analysis

For the MRI brain tumour pictures a general regression neural network (GRNN) used programmed three dimensional classification was proposed. This strategy had great tedious rate and classification precision. Another intelligent characterization system invented was Least Squares Support Vector Machines (LS-SVM). It recognizes typical and anomalous cuts of brain MRI information [1]. This system had an increase precision of arrangement over different classifiers as the incorrect negative in LS-SVM was low looked at. Because of programmed abandons recognition in MR pictures of brain, more research is being still performed.

### 3.2) Application of AI Techniques in Network Intrusion Detection

Intrusion Detection Systems (IDS) utilizes the various AI techniques for ensuring PC and correspondence systems from intruders. Intrusion Discovery System (IDS) a way toward observing the occasions happening in system and distinguishing the indications of intrusion.

#### 3.2.1) Artificial Neural Network in IDS:

ANN is a numerical project that consists of an interconnected group of artificial neurons which forms the data. In IDS ANN are used to show complex connections amongst sources of information and yields or to discover designs in information. In this a neuron ascertains the total by duplicating contribution by weight and with a limit. The output is transmitted to consequent neurons. Fundamentally, the ANN has summed up to: [6]

$$y_i = f \left( \sum W_{ik} . X_k + \mu_i \right)$$

Where  $W_{ik}$  are weights attached to the inputs,  $X_k$  are inputs to the neuron  $i$ ,  $\mu_i$  is a threshold,  $f(\bullet)$  is a transfer function and  $y_i$  is the yield of the neuron.

#### 3.2.2) Fuzzy Inference Systems (FIS) in IDS:

Sampada et al [2] introduced two machine learning standards: Artificial Neural Networks also Fuzzy Inference System, for the plan of an Intrusion Discovery System. They utilized SNORT to execute constant activity investigation and packet signing/logging on IP network during the preparation phase of the system. They developed a sign pattern database utilizing Protocol Evaluation and Neuro-Fuzzy learning method. They at that point tried and approved the models utilizing the 1998 DARPA Intrusion Discovery Evaluation Data and TCP dump crude information [1]. The informational collection contains 24 assault sorts. The assaults comes under these four principle classifications viz. Denial of Service (DOS), Remote to User (R2L), User to Root (U2R), and Penetrating. From the outcomes, it was appeared that the Fuzzy Inference System which is quicker in preparing, taking couple of moments, than the Artificial Neural Networks which took couple of minutes to localize generally, both the techniques turned out to be great, however with the Fuzzy Interference System having an edge over Artificial Neural Systems with its higher classification accuracies. Their experiment also demonstrated the significance of variable choice, as the two systems performed more regrettable when each of the factors were utilized without choice of the factors. Great outcomes were noted as a subset (around 40 percent) of the factors were utilized [11].

### 3.3) Application of AI Techniques in Power system stabilizers (PSSs) Design

Earlier from the 1960s, PSSs have been used to include damping to electromechanical motions. PSS is an extra control framework, which is regularly connected as a section of ferment control framework. The fundamental capacity of PSS is to utilize a flag to the ferment framework, delivering electrical torques for the rotor in stage with speed contrasts that moist out power motions. They perform inside the generator's ferment system to make

a piece of electrical torque, which is called damping torque, corresponding to the speed change. A CPSS can also be demonstrated by a 2-phase (indistinguishable), lead-lag system which is represented to by a profit  $K$  and two time constants  $T_1$  and  $T_2$ . This system is associated along a washout circuit of a time constant  $T_w$ . Flag washout piece goes about as a high-pass filter with time constant  $T_w$  which permits the flag related with the oscillations in rotor speed to pass unaltered. Moreover, it doesn't permit the relentless state changes to oppose the terminal voltages. The stage pay obstructs with time constants  $T_{1i} - T_{4i}$  supply the reasonable stage lead attributes to repay the stage slack between the information and the yield signals. The mostly used design of the PSS is shown in Fig. [9]

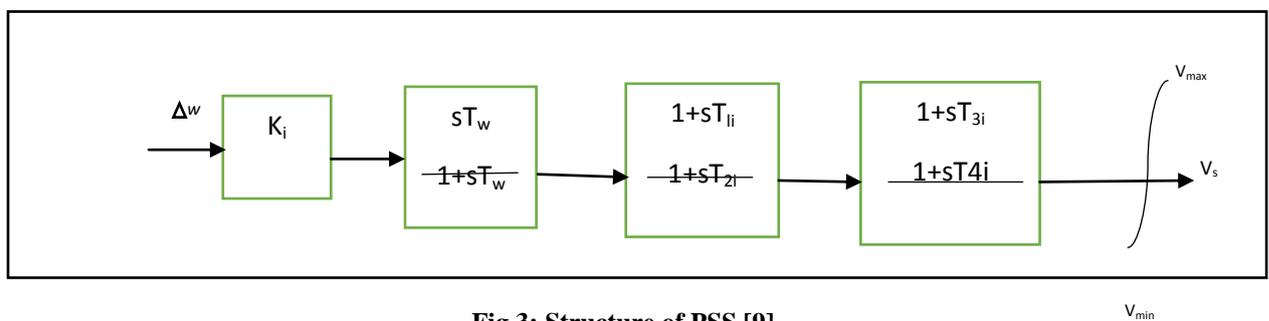


Fig 3: Structure of PSS [9]

In the field of power system operation PC programs are achieved and adjusted oftentimes agreeing to any varieties. AI has the capacity to control the high non-linearity of useful practical systems. The different advancements that are used as a part of PSSs streamlining issues are ANN, FL, ES, etc.

### 3.3.1) Artificial Neural Network (ANN) in PSS:

In power systems the almost uses of the manufactured neural system utilize a multilayer feed forward network. In the neural adaptive PSS, a feed front neural network with a solitary shrouded layer is proposed which incorporates two sub systems: adaptive neuro-identifier, in which the dynamic attributes of the plant are followed and versatile neurocontroller to moist the less frequency oscillations. Radial basis function network (RBFN) consists of three layers [1]: input layers, hidden layers, and output layers. Hidden layer discover focuses and size of the spiral premise capacities for singular example units and the yield layer finds the weights between the example units what's more, the yield units utilizing an unsupervised learning calculation. A recurrent neural network (RNN) stabilization processor is used to enhance the transient solidness energy systems in which both the representative and AVR is utilized. The heaviness of the proposed controller is balanced in-line. The signal output of the first RNN is added to the PSS signal output for excitation control. The signal output of the to start with RNN is utilized as a settling realizing signal for the governor system. ANNs are canny controllers to control nonlinear, dynamic systems through learning, which can undoubtedly suit the nonlinearities and time conditions.

### 3.3.2) Fuzzy Logic (FL) in PSS:

In 1964, Lotfi Zadeh created FL to address error and vulnerability which generally exist in engineering problems [9]. A configuration steps for a fuzzy rationale based PSS (FLPSS) was invented for a multi-machine control system. The information flag to FLPSS is the speed diversion of the synchronous generator and it's subordinate. For the heartiness of the FLPSS, five generator control systems were utilized and for planning a standardized entirety squared deviation file were utilized. This novel input signal based FLPSS was used in the multiple-machine condition.

### **3.4) Application of AI Techniques in the Computer Games**

Playing computer games is a standout amongst the most well-known uses for computer technology. In the advancement of PC games, they have developed from modest text based to the three dimensional graphical games with unpredictable and large worlds. The systems as graphical using, playing audio, user input and AI when assembled give the expected entertainment to play a computer game. Artificial Intelligence is the most imperative part of each computer game and playing game without Artificial Intelligence would not be any good times! On the off chance that we expel Artificial Intelligence from PC games, the recreations will be simple to the point at which no one will be keen on playing the computer games any longer!. Without the game AI, the triumphant would not be troublesome at all. Artificial Intelligence is used to take safety of regular issues in the computer games and give the highlights to the games. In particular, non-playing character (NPC), decision maker and learning are analysed. There are some ways that AI adds to current computer games. Most remarkably are unit development, simulated recognition, circumstance investigation, spatial reasoning, learning, bunch coordination, resource allocation, controlling, running, target determination, thus some more. Indeed, even setting subordinate liveliness and sound use AI [5].

Computer Game Problem Solved with AI:

Artificial Intelligence takes care of the three basic issues: non-playing character (NPC) movement, NPC decision maker, and NPC learning [8]. The four AI systems used are Path Finding, Bayesian Networks and Genetic Algorithms which enable a computer game give non-playing character's path finding and decision maker as well as learning.

#### **3.4.1) NPC Movement Utilising Path-Finding**

AI computer game should give a route to a NPC to go throughout the game world. For instance, When then player is on one part of the building and the beast is on the other, through which path through the building the beast will reach the player? This is the NPC development problem. AI Search Methods are utilized to discover the way/path in computer games. A\* algorithm is widely utilized for path arrangement as a result of its flexibility and determination the shortest path between two points. Typically A\* algorithms have three fundamental attributes, fitness, objective, and heuristic or f, g, and h respectively. g will be the cost to go from the first node to some node between the objective. h is the heuristic or evaluated cost to get from the present node to the objective. f is the total of g and h, or the aggregate evaluated cost of the way experiencing this node. The A\* algorithm also likewise keeps an Open list containing nodes that haven't been investigated yet and a Ended rundown of hubs that has been investigated. The accompanying is pseudo code for the A\* calculation [8].

1. Let A = the starting point.
2. Assign k, l, and m values to P.
3. Add A to the Opened list. At this point A is the only node on the Opened list.
4. Let X = the best node from the Opened list (best node has the lowest f-value).
  - a. If X is the goal node, then quit. A path has been found.
  - b. If the Opened list is empty, then quit. Some path has been found.
5. Let Y = a valid node connected to X.
  - a. Assign k, l, and m values to Y.
  - b. Check whether Y is on the Opened and Closed list.
    - i. If then, check if the new path is more advantage (lower k-value).
      1. If then, update path.
      - ii. Else, add Y to the open list.
  - c. Repeat the step 5 for all valid children of X in it.
6. Move X from the Opened list to the closed list and repeat from step 4 [8].

#### 3.4.2) NPC (Non-Playing Character Decision) Making Using Bayesian Networks

In the earlier case of the beast arranging a path to the player, an alternate issue must be solved first before arranging the path. The problem is does the beast even know the player is present in the building? On the off chance that the game designers give the full information of the game world to the NPC at that point there would be no enjoyment in playing the game. It is a case of non-playing decision making. In this Artificial Intelligence is expected to create a NPC to act like a human. At the point when the player comes inside the building from the one side, the beast will be unconscious of the nearness of player due to the wall between them. In the game that the player enters causing a noise disturbance, at that point the beast can sense the player and will begin arranging the shortest path as discussed in the non-playing character movement utilizing path creation. One Artificial Intelligence technique that is utilized to execute a Bayesian Network. It helps non-playing character to do complex reasoning like human. At this the computer computes probability that the beast detecting the player if player has entered into the building. The probability expression of complex reasoning can be written as;

$$P(B|A) = P(B|A) P(A) / P(B) [1]$$

Where P(B|A) is the probability that the monster would detect the player if the player had actually tripped, P(A) is the probability of the monster detecting the player and P(B) is the probability of the player catching [1].

#### 3.4.3) NPC Learning:

Computer games utilize the AI Genetic Algorithms to attempt and implements learning in NPC's. A hereditary algorithm works in the accompanying way [5].

1. Create a first generation population of random organisms.
2. Test them on the issue that is being comprehended and rank them as indicated by fitness. In the event that the best organisms have achieved our performance objectives at that point stop.

3. Take the best performers and mate them by applying hereditary operations, for example, hybrid and mutation. Add a few brand new random organisms to the population to present new variety and help guarantee against converging on a nearby greatest.

4. Loop to the stage 2.

Hereditary Algorithms attempt and assemble the exact example and they are very complex. This Artificial Intelligence technique has not ended up into many recent computer games since it takes a lot of computer assets and time to create an example or NPC into something useful.

### **3.5) Application of AI in Accounting Databases:**

The use of AI is researched as the basis to look back the issues of accounting database system. The accompanying are a few troubles with present accounting database system. The necessities of decision makers are not met by accounting information. Humans don't comprehend or can't process the modernized accounting databases. Systems are difficult to utilize. There is focus on the numeric data. Coordinating intelligent major systems with accounting database system can control (either with the decision maker or be the independent of decision maker) of the examination of larger volumes of files/data may contain coordinate support with the decision maker. Therefore, the system can examine the data which was collected and help the clients' comprehension or translating exchanges to picture out what accounting events are caught by the framework. With the AI we store and recover learning in natural language. There are some AI tools or the techniques that assistance in more understanding caught by the accounting database system. There is more accentuation on representative or content information as crossed to simply numeric data to capture context [4]. The AI and intelligent system incorporates knowledge with the database to help clients. Without clients direct participation such models help the clients by dealing with large volume of data. Such models also assist the decision/choice makers under time requirements; recommend options in the seeking and assessment of data.

## **IV.ADVANTAGES & DISADVANTAGES OF AI:**

### **4.1 Advantages of Artificial Intelligence:**

#### **4.1.1) Error Reduction:**

AI causes us in lessening the error and the shot of achieving exactness with a more noteworthy level of accuracy is a possibility.

#### **4.1.2) Troublesome Exploration:**

AI is connected in different examinations, for example, exploration of space. Shrewd robots are bolstered with data and are sent to investigate space. Since they are machines with metal bodies, they are safer and have more noteworthy capacity to bear the space and hostile atmosphere. AI and the department of robotics can be put to use in mining and other fuel investigation forms. Not just that, these intricate machines can be utilized for investigating the sea depths and consequently beating the human restrictions. Because of the programming of

the robots, they can perform more arduous and diligent work with more noteworthy obligation. They don't destroy effectively.

#### 4.1.3) Day by day Application:

Figured strategies for computerized thinking, learning and perception have turned into a typical marvel in our regular day to day existences. We have our Google Assistant or Siri or Cortana to help us out. We are likewise taking off for long drives and trips with the assistance of GPS. Cell phone in a well-suited and consistently is a case of the how we utilize computerized reasoning. In utilities, we find that they can anticipate what we going to type and correct us in spelling. That is machine Intelligence. When we take a photo, the AI algorithm recognizes and identifies the individual's face and tags the people when we are posting our photos on the web-based social networking sites. AI is generally utilized by financial related organizations and banking organizations to arrange and oversee information. Recognition of extortion utilizes AI in a smart card based framework.

#### 4.1.4) Dreary Jobs:

Dreary occupations which are dull in nature can be completed with the assistance of machine intelligence. Machines think speedier than people and can be put to multi-tasking. Machine intelligence can be utilized to do unsafe tasks. Their parameters, dissimilar to people, can be balanced. Their speed and time are computation based parameters as it were. When people play a Computer game or run a PC controlled robot, we are really communicating with AI. In the game we are playing, the PC is our adversary. The machine intelligence designs the game development in light of our movements. We can view gaming as the most widely recognized utilization of the advantages of AI.

#### 4.1.5) No Breaks:

Machines, not at all like people, don't require visit breaks and refreshments. They are modified for extend periods of time and can persistently perform without getting exhausted or distracted or even worn out.

## **4.2 Drawbacks of Artificial Intelligence:**

#### 4.2.1) High Cost:

Creation of AI requires tremendous expenses as they are exceptionally complex machines. Their repair and support require huge expenses. They have programming programs which require visit up degree to take into account the necessities of the changing condition and the requirement for the machines to be more brilliant by the day. On account of extreme breakdowns, the method to recoup lost codes and re-instating the system may require enormous time and cost.

#### 4.2.2) No Replicating Humans:

Intelligence is accepted to be a gift of nature. An ethical contention continues, regardless of whether human intelligence is to be duplicated or not. Machines don't have any feelings and good moral values. They perform what is modified and can't make the judgment of right or wrong. They can't take choices as they closer to the situation which is not programmed to them. They either perform mistakenly or breakdown in such circumstances.

**4.2.3) No Improvement with Experience:**

Unlike humans, AI can't be enhanced with experience. With time, it can prompt wear and tear. It stores a huge amount of data yet the way it can be gotten to and utilized is altogether different from human intelligence. Machines can't adjust their reactions to evolving conditions. We are always shelled by the inquiry whether it is truly energizing to replace humans with machines. In the world of AI, there is in no way like working with an entire heart or energetically. Care or concerns are absent in the machine intelligence dictionary. There is no feeling of having a place or fellowship or a human touch. They neglect to recognize a dedicated individual and a wasteful person.

**4.2.4) No Original Creativity:**

Do you need innovativeness or creative imagination? These are not the strong point of Ai. While they can enable you to plan and make, they are no match for the power of feeling that the human brain has or even the inventiveness of an innovative personality. Humans are sensitive and they are emotional intelligent. They see, hear, think and feel. Their thinking's are guided by the emotions which totally needs in machines. The natural instinctive capacities of the human brain can't be imitated.

**4.2.5) Unemployment:**

Supplanting of humans with machines can prompt substantial scale unemployment. Unemployment is a socially unfortunate phenomenon. Individuals with nothing to do can prompt the damaging utilization of their creative personalities. People can pointlessly be exceptionally subject to the machines if the utilization of AI ends up plainly wild. Humans will lose their innovative power and will end up plainly apathetic. Additionally, if people begin thinking damagingly, they can make havoc with these machines. AI in wrong hands is a genuine risk to mankind by and large. It might prompt mass destruction. Likewise, there is a consistent dread of machines assuming control or superseding the humans.

## **V.CONCLUSION**

The field of AI (Artificial intelligence) has the ability to the machines to think systematically, utilizing concepts. Gigantic contribution to the different areas has been given by the AI techniques in the last 2 decades. Artificial Intelligence will be continuing to play an increasing important role in the various fields. This paper holds on the idea of AI (Artificial Intelligence), areas of AI used and the AI techniques used as a part of the category of Power System Stabilizers (PSS) to control system constancy and damping of oscillation and give increasing performance, in the Network Intrusion Identification to protect the network from outsiders, in the field of medical area in the field of drug, for medical picture classification, in the accounting databases, and portrayed how these AI techniques are used as a part of PC games for the solution of the regular issues and to give features to the games so that we can to have some fun. There is bright future in the examination of Network Intrusion Detection and there is additionally positive future in the area of Power System Stabilizers. I conclude that further research here should be possible as there are extremely encouraging and beneficial outcomes that are realistic from such techniques. While scientists have not yet realized the full potential and ability of Artificial

Intelligence. This innovation and its applications will probably have far reaching consequences for human life in the years to come.

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