APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN CREATIVITY

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Abstract: Creativity seems peculiar because in most of the cases, when we often talk about to explain creativity, there is not any specific scientific reason. People talk about the words, "intuition" and "inspiration" in context of the creativity. As a matter of fact, we are not aware of how do we perform other activities such as language understanding, pattern recognition, visual art, machine learning etc. but we have the best Artificial Intelligence Techniques able to perform such activities. Creativity is an innovative field, that have already proved ideal in providing assistance in virtually every field weather we are talking about healthcare, finance, robotics, art, music and so on., There is no doubt that the AI can certainly offer many advantages in serving the services smartly, efficiently, intelligently and act as an inspirational assistant. This Article represents the role of Artificial Intelligence in Creativity, and we have tried to explore most of the applications of this topic with the pros, and cons. We further focus on the future scope of AI in creativity. We have also tried to explore the technologies in through some creative models and text.

Keywords: Cognitive science, Deep Learning, Machine learning, neural networks, intelligent, analyse, NLP, GAN

I. INTRODUCTION

Artificial intelligence is the imitation of intelligence in machines and Creative Artificial Intelligence is the imitation of creativity in machines. In today's Modern Era Artificial Intelligence in Creativity is a multidimensional approach used in various fields such as Art, Music, Advanced technology, Medicinal facilities, Robotics, Social Media, etc. The main Objective of using creativity in AI is to simulate the human level creativity or intelligence in computers or machines, so that, the machines can be autonomous and Cognitive. Creativity is a trait of human intelligence. It is acquainted in everyday scope such as the relation of ideas, reminding, and perception, analogical thinking, searching a structured problem-space, and reflective self-criticism. And it can acquaint in machines using AI techniques and algorithms. Creative AI is being used as a workmanlike tool, it made the boundary between the man-made and machine made invisible.

II. APPLICATIONS INVOLVED

A. Artificial Intelligence in Social Media

There is a lot of effort required to manage Social Media. Various Social networking Organizations are evaluating the data over the social networking sites as they are working upon what is trending, what are patterns and hashtags required nowadays with the help of Artificial Intelligence.AI is useful in evaluating the user's behaviour. Artificial intelligence can recognize the crises and also can have the track over the unstructured user words to get a personalized view of the user with the help of various AI Algorithms. Demographics and different kinds of

content analysis are possible because of this technology.

Most of the Social networking Companies are using Artificial Intelligence to grape up the level of their companies as follows:

i. Facebook

It uses machine learning to analyse the text, mapping population density, easy translation, etc.

ii. LinkedIn

It offers job to the people and suggest them the various fields according to their capabilities using AI Techniques.

iii. Snapchat

It offers filters that move your face with time. With the help of AI technology and perception view, it can evaluate the features too.

iv. Pinterest

It's about 200 billion people who pin the content of this platform. Pinterest shows the content of users' interest with the help of neural networks.

v. Twitter

This Platform creates a thumbnail of a user complete image to detect a face using AI Algorithms. Twitter uses this neural networking to suggest replies for answering a tweet.

Benefits of Using Artificial Intelligence in Social Media

To Recognize Images

With the help of AI Algorithms, Social media companies can recognize the content and figures, and patterns that help know the behaviour of the users and to get valuable data and information.

AI-Powered Chatbots

AI-powered Chatbots are used to answer the customers' queries of a various business organization using AI technologies on social media.AI help in giving satisfiable answers to the users up to a great level in zero time. And it will provide a great advantage to the companies as their relation with the customer is intractable and satisfiable.

Analyzing Sentiments

AI can analyze the nature of the users by using their comments, posts, and queries and it will help in knowing how you are feeling. For such kind of analyzing AI used NLP (natural language processing) to know the positive and negative nature of the user.

Increased Security

Social Media protect the user's personal information and data and help them in providing security. There is proper fraud detection over the platforms and every user's account is well authenticated.

Let's have a look over the applications of AI in social media:-

Snapchat

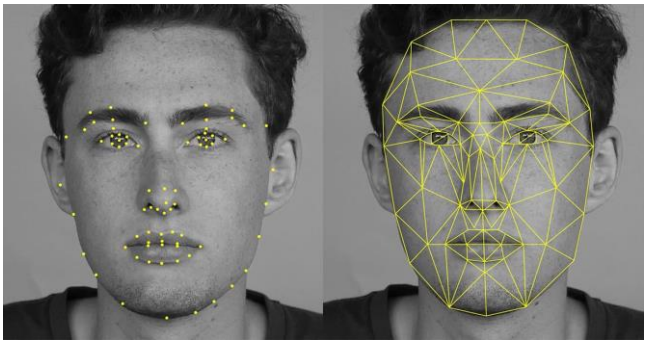

image1:- *a look at how snapchat's powerful facial recognition works*

I. Time Machine Lens-

It uses AI to age and de-age selfies as seen through your smartphone. One only needs to swipe up the screen from left to right. Sliding left shows your childhood by removing your facial hair, while the right side adds years to your age and puts wrinkles onto your face, hair gray, and shrunken eyes. Similar kinds of lenses change your gender too, male filters will add moustache and beard, and female ones will give you a bob

cut. Despite the small processor of your smartphone, it will show you results in seconds.

II. Nowadays, it is using the advantage of speech recognition technology to enhance its features. Like, saying words such as "yes", "no", "wow" and "love" will show you the related filters and trigger the animated effects. For instance, "yes" will trigger a zoom effect, "wow" will apply a surprised emoticon or sticker on the emoji.

image2:- *Use of AI in gender swapping filter*

Facebook

I. Analyzing Text-

The text is shared on social media in a very large amount. To analyze it, Facebook uses a tool called Deeptext, which helps it to test several thousand words per second across 20 languages accurately. Facebook then redirects users to the advertiser based on the conversation going on. For instance, if one says “I need to buy a dress” then it will tell the clothing website the need and related advertisement will be shown in their feed.

II. Mapping Population Density-

Facebook is working to plan the world's population density nowadays so that they able to map it. By 2016, it has mapped 22 nations and today it covers almost the whole of Africa. It has been made possible through on-ground and high-resolution satellite imagery. This kind of information helps us in vaccination schemes and disaster relief.

III. Easy Translation-

With 3909 written language existing in the world and people posting in their language becomes a tedious job for everyone to understand. With the help of Facebook’s Applied Machine Learning Team, it becomes easy to find preferred translated posts in their feed. Moreover, while having a conversation a sentence can also be translated into a specific language.

IV. Chatbots-

Facebook has a powerful and well functional bot API for the messenger platform and performs three functions-

- Send/Receive API
- Message Template
- Welcome Screen

V. Caffe2go-

Another feature of using AI on Facebook is Caffe2go, which enables the app to alter video using machine learning by adding creative effects. It is useful in creating live videos and editing them later with artsy touches.

VI. Preventing Suicide-

Suicide is the second major cause of death among the ages 15-29 years old. Facebook can now help by averting suicide through the use of AI. It can sense the post which signifies suicidal tendencies, the frequent users who are posting depressive things or concerned comments from family or friends. Tracking human nuisance is quite complex, but AI can track the context and understand the suicidal pattern.

VII. Detecting Bad Content-

A major problematic issue on social media is security and privacy. Facebook can detect content falling into seven main categories using AI: nudity, graphic violence, terrorism, hate speech, fake account, and suicide prevention (already discussed). It helps in identifying fake accounts and shuts them down instantly.

B. Artificial Intelligence in Medical Field

The need for AI in the healthcare sector is increasing day by day with the increasing number of healthcare datasets, and their complexities. The augmenting need to reduce healthcare and hardware costs, improving computing power and raising the number of cross-industry collaborations, engendered the need for improvised healthcare services.

Let's discuss the utilities of Artificial Intelligence in the medical field:

Sound Sense Learn

It supports real-time machine learning and data from the thousands of users to improve the personalized and precise hearing of patients in real-life situations. To satisfy their patients, Sound Sense gives them the opportunity to customize their hearing experience according to their needs and intentions by indicating a series of A/B listening comparisons.

Overcome distortion

The comb-filter effect occurs when direct sound and processed sound mix at the eardrum which hinders the amplified sound compared to the direct sound which enters into the ear through any leakage around or aeration in the ear tip. The PURE SOUND program practically eliminates the comb-filter effect, along with its negative effect on sound quality, by lowering the average delay of the processed sound to less than 0.5 milliseconds.

Sound classifier

There are over two million different combinations to sample of different frequencies with different levels to seek out the optimal listening settings, but, with the help of AI we can reach the optimal outcome in just 20 interactive steps with a person or less.

Symbiotic collaboration

The listener has the facility to adjust and filter their auricular settings to satisfy their desire of precise listening in real-time without changing any of the programming.

Bionic eyes

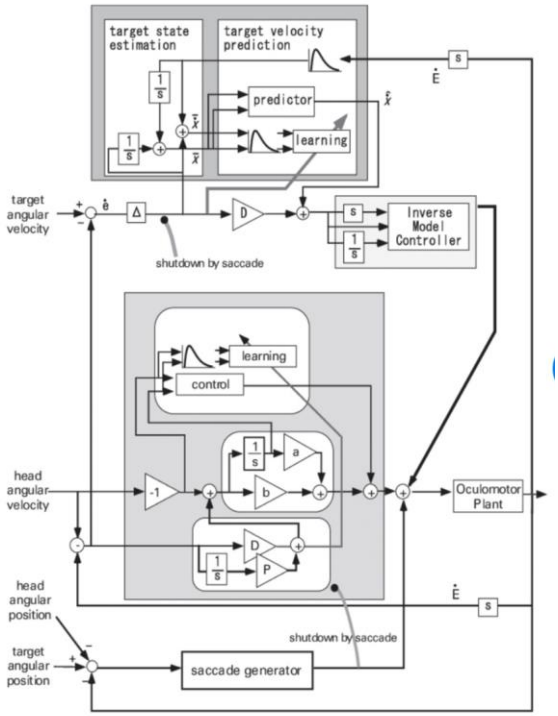

image3:- *Integrated model of VOR-OKR, smooth pursuit and saccade Motors commands out of the VOR-OKR and smooth pursuit are summed. The saccade module corrects the positional errors periodically*

Models of Saccade

A saccade acts as a position servo controller, is used to move eyes voluntarily and to keep the target at the center of the retina in minimum time.

Models of Smooth Pursuit

Smooth pursuit, a velocity servo controller, is used to trace a moving object and to rotate the eyes at an equivalent angular rate.

Models of VOR and OKR

VOR is used to generate a stable image of the visual field during head turns whereas OKR is used to smoothen the acceleration of the eye in the direction of the moving target to reduce the error between eye velocity and target velocity.

AI invented drug

The DSP-1181 molecule was the first molecule created by AI using algorithms that analyse various potential compounds. Soon this drug will be utilized for the therapy of OCD patients. The algorithm used for molecule is agnostic, so are often applied to any disease. Typically, drug development takes about five years for trial, but through AI algorithms drug trials can be completed in just 12 months.

Predict desired properties

AI algorithms will choose only those compounds for synthesis which have desired properties in such a short period of time which leads to save time and money by preventing work on compounds that are unlikely to be effective.

Accelerate the discovery

Generates ideas for novel compounds, which can possess all the required properties for fulfilment – which could take the peak of invention of effective new drugs to a new level.

Alleviate repetition of tasks

Alleviating the necessity for repetitive tasks, like the analysis of thousands of histology images – saving many person-hours within the laboratory.

C. Artificial Intelligence in Music, Dance, Writing, and Visual Arts

Technologies like Artificial Intelligence or Machine Learning are notoriously changing the creation of creative activities such as music, dance, fine arts, etc. and here computers are playing remarkable roles in these activities. AI technologies creating wide-range opportunities for researchers and artists like musicians, dancers, painters, etc. These days' computers are playing many roles like they can be a brush, a musical instrument, a canvas, and so on. Using these technologies we can generate so much creative software which will be used for independent creative chores, like writing poems, making artworks, and creating new musical beats, etc. Artificially creative work enables us to understand more about human creativity and to create innovative programs for artists, where the software acts as an ingenious co-worker instead of a basic tool. Every creative idea is an unprecedented and valuable combination of known ideas. Specifically, dance steps, art models, musical pieces, theorems, or poetry can be generated from a specific set of existing components and, consequently, creativity is a complicated form of problem-solving that involves analogy, learning, memory, and reasoning under restrictions, among others, and thus it's possible to copy using computers. This section gives you an overview of some achievements in the fields of music, dance, poetry, and visual arts. The reason behind focusing on this innovative world is because it is filled with fascinating ideas and the outcome we get is far more impressive.

1. Artificial Intelligence in Music

Artificial Intelligence is playing a major role in the records of computer music since the 1950s. Lately, lots of effort had been done into compositional and improvisational systems and they had tried a lot to improve the performance. In this segment, we analyze a variety of significant accomplishments in AI overlooking music performance, music composition, music spontaneity, and improvisation, by focusing on the performance of expressive music.

Applications of Artificial Intelligence in Music

i. Jukebox

This software is based on neural networks and can generate music, including uncomplicated singing, as raw audio during a kind of genre and artistic style. This model works on unsupervised machine learning techniques to place similar

artists and genres together in the same clusters as shown in image4.

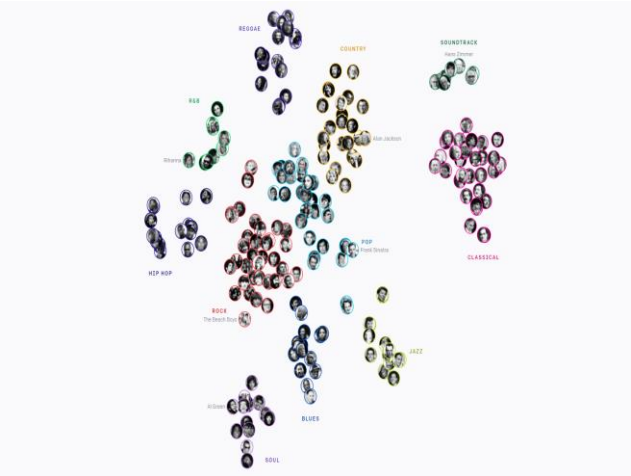

Image4:- *This picture represents the cluster of musician*

Dataset

Creators use the substituting datasets of around 1.2 million songs, nearly 600,000 of which are in English, just to train this model, and then put together with the most probable identical lyrics and metadata from LyricWiki. The metadata used for this have attributes like album genre, year of the songs, and artists, in coexistence with familiar moods or playlist keywords connected with each song. They take 32-bit, 44.1 kHz raw audio for training and execute data augmentation by arbitrarily down mixing the proper and left channels to get mono audio.

Example of Metadata:-

Song = Lose Yourself

Artist = Eminem

Genre = Hip-Hop

Year = 2002

Mood/Keywords = Inspiring, Pump-up, Aggressive

Limitations

- Somehow quality of music generated by a jukebox is contrasting compared to human-created music.

- While Jukebox mainly focusing on musical quality, soundness, audio frequency, and other skills to condition on producer, genre, and lyrics, there is a huge slit between these generations and human-created music.

ii. MuseNet

Similarly, Jukebox MuseNet is also based on neural networks and can generate a musical composition of around 4-minute with 10 dissimilar instruments and can merge various styles. But this model was not precisely programmed with human understanding of music, but apart from this, it can discover patterns of rhythm, elegance by learning, and harmony to forecast or to predict the following token in many thousands of MIDI files. These models work on unsupervised machine learning techniques, where we train a big dataset to predict the next token of the data in order.

Dataset

MuseNet's Creators collected the training data from many various resources. For this project, ClassicalArchives and BitMidi contributed their huge collections of MIDI files, and they also got some collections online, specifically pop, African, Indian, jazz, and Arabic styles. Further, they utilized the MAESTRO dataset.

Limitations

-The instruments suggested by a user are good but somehow not compatible with the systems. It creates every note by calculating the possibilities and probabilities across every possible note and instrument. This model always tries to work on your instrument choices, but there is always a chance that it will choose something else.

-Sometimes MuseNet peculiarly put together the designs and instruments for example Chopin with bass and drums. The creation would be more

realistic if you select the closest instruments to the composer and usual style of the band.

2. Artificial Intelligence in dance

AI already proved its importance in various sectors, whether it is about predicting a random word that you will type on screen or verifying your identity from a usual picture. But anticipating gestures is tricky. But still, AI has been successfully able to show its capability in dance as well.

Application of AI in Dance

i. Living Archive

It is an AI tool used for choreography, this tool has been fed hundreds of hours of video footage by the choreographer's archives and from other 10 dancers whose individual styles were encapsulated in solos that have been performed for the technology.

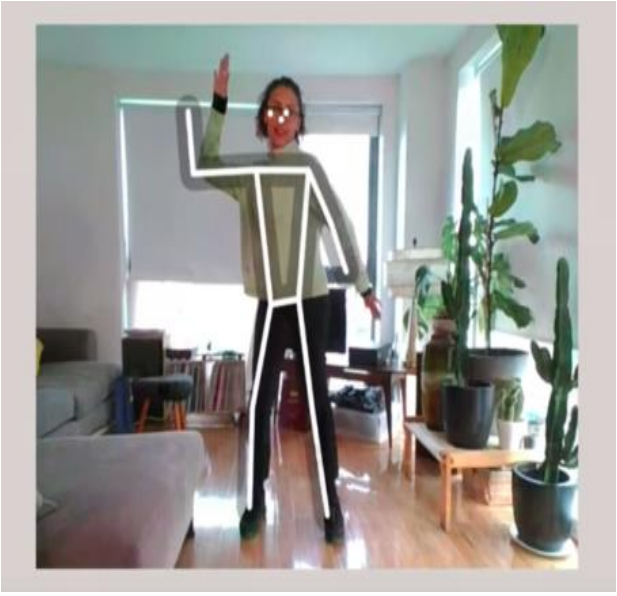

Image5:- *shows the tool creating a skeleton-like structure from a human dancing pose*

This tool requires a dancing video for input shown in image5 from the webcam and then it will extract the skeleton-like structure of that dancer making a particular pose, by drawing points between their body parts. Then the tool uses this input and runs on three different-different algorithms to predict what next or the subsequent pose might be taking as the consideration of a specific dancer and other 9 from the set as well.

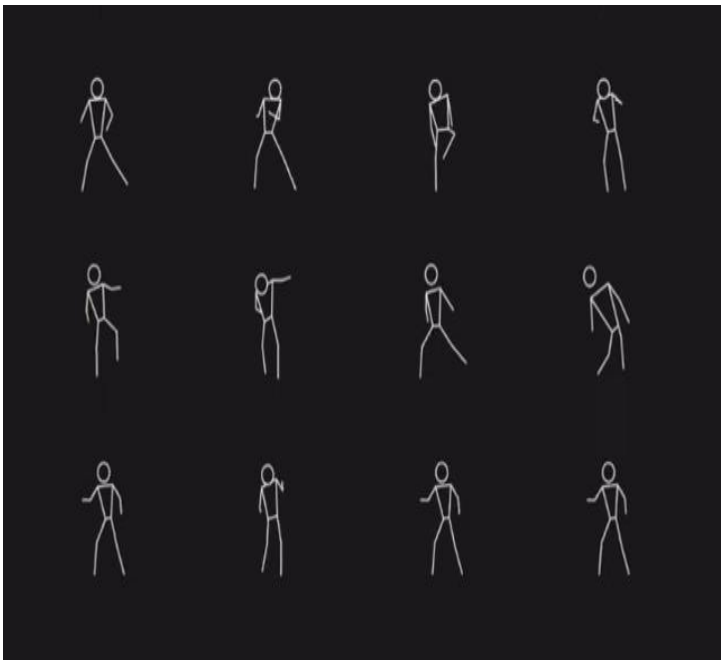

image6:- *Skeleton-like structure by Lliving Archive*

After that, this has produced a ten seconds video of 30 potential choreography sequences, which was further displayed on the screen where steps were performed by that skeleton-like structure shown in image6.

3. Artificial Intelligence in WRITING

There has been massive progress in language-generating Artificial Intelligence in the past few years. For an instance, if we look at a language generator that has been trained on like 570GB of text are now able to write amazingly persuasive essays. Google, also functioning on language generators, and this software helps us to write sort of a legendary poet.

Application of AI in Writing

i. Verse By Verse

In the previous year, Google has launched a new Artificially Intelligent tool for poem composition. It allows us to compose a beautifully written poem using various suggestions from classic American poets. This suggestion has been generated with the help of Artificial Intelligence and this is extracted from the readings of the poet's respective compositions. It means the program uses some machine-learning algorithms to detect the pattern behind the compositions of the specific poet and apply that in the generation of new poems.

image7:- *Famous poets whose poetry suggestions have been used in verse by verse*

This tool takes the suggestions from nearly 22 American poets; having some legends like Dickinson, Whitman, and Edgar Allen Poe shown in image7. Users need to select up to 3 poets for the suggestions and then they picked some sentences of the poem they wish to write. Users can select poetic forms like vers libre and quatrain and it even allows us to pick the number of syllables per line. After selecting all the prerequisites user writes the first line of the poem and then automatically the tools will generate the rest of the poem. AI helps us in the creation of a poem by suggesting line by line and makes it more interactive than other topmost language generators out there.

4. Artificial Intelligence in VISUAL ARTS

These days whether it is dancing or poetry, math or music, we can see AI as a co-worker, not a competitor. These days creativity is not like a mystical gift that is beyond scientific research instead it is something that needs to be simulated, investigated, and harnessed by using the latest technologies for the sake of society's development.

Applications of AI in Visual Arts

i. Painting Fools

image8:- *Second picture is the portrait of first picture created by the software called The Painting Fool.*

This software has developed by Simon Colton, it helps in the creation of artworks with the help of a little bit of guidance. This tool can simulate various styles digitally but doesn't apply paint to canvas.

The Painting Fool requires a little bit of teaching and it will come up with its concepts by logging on for source material. This tool will produce art that is meaningful to the audience and the specialty of this tool is that this draws on human experiences that how we feel, act, and argue.

For example, in 2009, this tool has created its exhibition on the war in Afghanistan, supported a news article. This artwork is about explosions, Afghan citizens, and war graves.

D. Applications of AI in Robotics

Artificial intelligence and robotics is a powerful fusion for automated robots. It gives robots a new computer vision to sense, calculate and navigate their reactions correspondingly. In Today's modern era, AI is playing a very essential role in the robotic world by making robots more flexible, intelligent and by improving the learning capabilities, perception, language-understanding, problem-solving and logical reasoning, so that their functionality can be improvised and they can perform more complex tasks. Artificially intelligent robots are a terrific creation in the field of robotics and AI.

At Oxford University, on June 17, 2019, a team of scientists who are specialized engineers in robotics has manufactured a robot named Ai-Da (a female robot) who has human-like features and use the algorithms developed by them. she has an in-build camera in her eye that captures images, Then instructions have been sent by a series of algorithms to her robotic arm or hand to perform a specific task, and this hand was created by students based in Leeds, the U.K. they named Ai-Da on the name of world's first female computer programmer Ada Lovelace. These robots created a history in the world of Ai and Robotics. This is a very creative robot and can make drawings, sculptures, and paintings with the help of her algorithmic instructions. Ai-Da became the first artistic robot who stage a solo exhibition.

In today's global manufacturing world, there are many ways in which AI is used in Robotics.

1. Autonomous

The autonomy of a robot is mainly divided into three phases perceiving, planning by sensing the environment, and execution. The main objective of collaborating AI and Robotics is to enhance the level of autonomy through learning, so that the robots work efficiently in planning specific tasks, predict the future, and may interact with this world easily. Self-driving cars and internet cars are the most fascinating examples of this factor. In the creation of humanoid robots, scientists are using this type of artificial intelligence so that it can sense their environment quite well and interconnect with their surroundings. And for more, these days Robotic surgeons are also becoming very famous because they don't require any type of human intervention while doing their work.

2. Perception

We can define perception as the capability of perceiving including sense to hear, see, or well-informed of their surroundings. Robot vision falls under this category and generally, they need some artificially intelligent algorithms to perceive. For an instance, if you want a robot to sense or detect an object while it was selecting from a group of different objects and placing it in some other location. This activity requires a specialized vision program or some AI algorithms to identifying different types of objects and then we need to train our robot on this program.

Perception is not only an art of planning but also an art of perceiving, creating, and sensing the environment by the robots. This permits robots to understand non-verbal communication i.e., seeing emotions of humans and tries to interact with them using their perception power.

3. Language-Understanding

Robots are now being used in hotels, hospitals, or even in the military across the world. Almost all of the robots use NLP (Natural Language Processing) to interconnect with customers in a more humanly way. The more they learn the more they interact with the surroundings. For instance, Call Screen that has been launched by Google is a feature that can detect or handle fraud or scam calls and available on Pixel Phones and

able to display the text of the person speaking instantly. Deep Learning has been used by YouTube to generate automated captions and this is practicable with the help of Natural Language Processing (NLP).

NLP is a subset of AI that emphasis on how machine recognizes the human language. Its main concern to build a system that perceives text and able to perform a specific task on it like translation, classification, or grammar checking so that they can being capable of giving a meaningful output. It is a large area of study that demands various skills.

Another technique that has been used is GAN (Generative Adversarial Networks) it is a machine learning model in which we compare two different neural networks to get to know which is more accurate for predicting events. For example, (see image9 that represents the mechanism of detecting) in detecting human voice initially a neural network works on many test set of voice and detect which voice audio represents to the same person most probably, and after that, for verifying this a second neural network produces audio data and runs it through the first one and check is it belongs to them that human voice, if not, program will correct its sample and re-run it through the classifier. These two networks repeat this process until they get a natural sample.

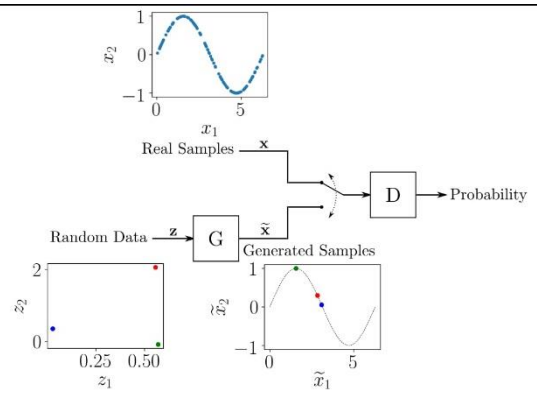

image9:- *working of GAN competing two neural net to find best one out*

4. Problem-Solving

As we have proved that robots are a helping hand for mankind. They can make decisions, solve problems in just a few seconds or may be in milliseconds, translate one language to another, and collect information that is usually required by us. They can even dance, sing, write or recite. They can build candy bars, electronic devices or even design big cars. Nowadays robots have been used in factories for building things, in restaurants for servicing, in hospitals for treating people, and in the military for tactics and making strategies, etc. Thus, they helped us a lot in different ways in different fields because they have a lot of hands or legs or a fast running brain compared to us. And these things are now possible just because of Artificial Intelligence.

E. Artificial Intelligence & Advertising

In the past, it was almost impossible to predict the success of an advertising campaign. Data analysis of such a large audience is not only expensive and labour-intensive but also not entirely reliable. But with the help of AI, predicting the success of an event becomes a little easier, and it also supports better decision-making. It can analyze each consumer simultaneously while recording detail of every single minute of the event. The Augmented Intelligence of AI is designed to help in all content creations areas. AI takes on an assistant role instead of lead role so that it will not completely replace human creativity. Some augmented intelligence tools used for advertising:

Research & Insights

Picasso Labs: its creative analysis reviews audience, brand, and competitor content to provide discernment.

Automated Insights: It uses NLP to convert huge amounts of data into intelligible narratives.

Creative

Lyrebird: It includes emotion, generates script and creates audio from small samples within fraction of seconds.

Persado: It is an AI-generated copy which creates custom social media ads, and email subject lines with the use of data and personalization.

Adobe Sensei: It assists designers in the production of video and images, also powers augmented features across Adobe products.

Account Management

Albert: It is a marketing platform which help in making media buying and targeting across multiple digital channels as a self-regulating task.

Lobster: It allows accrediting of searching and cognition of social media.

III. PROS AND CONS

PROS

Increased Precision/Accuracy: With the help of creative artificial intelligence the chances of error are almost zero percent, and there is greater accuracy and precision can be achieved.

More Adaptive: AI finds application in the space universe. Artificially Intelligent robots can be used to do research about space. And especially they are not affected by atmosphere change.

Save Need for Human Resource: Various Organizations are using intelligent robots that are the digitally assistants of the users to interact and communicate with them and hence they are saving the requirement of human beings. Artificially Intelligent machines can replace human beings in many kinds of work even in the laborious task too.

No Sleep: The best advantage of Artificially Intelligent Robot is that they do not need to sleep/break or rest, and can function continuously without getting bored/tired.

Think Logically: Since, because Robots can think logically without being emotional, and there is always a specific scientific reason behind it, the decision they make always appear right.

CONS

Robots Superseding Humans: There is a nervousness in human beings of robots that they can be the surrogate of them. Human is the master of computers. But, if things goes in wrong direction, it will prove disastrous.

Unemployment: If robots take place of human being, for sure it will lead to unemployment. It will leave many people jobless or unemployed, and there will be chances of starvation for some poor people.

The cost incurred in Management and Repair: Various Programs and algorithms need to be updated or changed to satisfy the changing needs, and machines need to be made smart and efficient. It will be costly to change/repair. It will be time-consuming and costly of finding out the procedures of losing data and facts.

Abilities of Humans may diminish: With the use of artificial intelligence, human beings are losing their physical and mental abilities as they are becoming completely dependent over the machines.

Wrong Hands: The control in the hands of robots may prove destructed too. Machines do not think before act. Thus, they may be programmed for the wrong objectives, or for mass destruction and it may affect our environment.

IV. FUTURE SCOPE OF AI IN CREATIVITY

Artificial intelligence is impacting the upcoming future of industries and human beings in various ways. It is acting as the main driver of upcoming technologies like large data and robotics, and it will keep acting as a technological innovator for the future. AI has made complex tasks simpler

for artists. It will help the designers in creating innovative clothing that will appeal to the audience by analyzing and recognizing trending colours, styles, and patterns. A recent studying show that creative designers are embracing the potential of AI tools which made their lives easier by enhancing the creative capabilities. AI is now, a facilitator and extension of our creativity. In the future, Artificial Intelligence is likely to impact market techniques, business structures or models, sales procedures, and customer services and evens in customer behaviours as these Artificially Intelligent Robots are being used everywhere. Robots will keep us safe, especially from disasters and helpful in various medicinal treatment as they can solve problems very smartly and efficiently.

V. Conclusion

Artificial Intelligence in Creativity plays a significant role. Artificial Intelligence hides the gap between the artificial and real i.e., man-made and machine made. We have concluded from the above data that Creative Artificial Intelligence provides us smart robots, well healthcare facilities, efficient and smart virtual assistants, monitored and secured social media, and so on. AI technologies as machine learning, deep learning, neural networks, NLP, computer vision helps us in providing better techniques and suggestions in different fields. And also AI improves our existing systems by making them more accurate, faster, automatic and faultless.AI has also advanced our Art, Music, Technologies, Medicinal treatment as discussed above. Artificial Intelligence is going to be very innovative and helpful in the upcoming years by giving more impact on the quality of the life.

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