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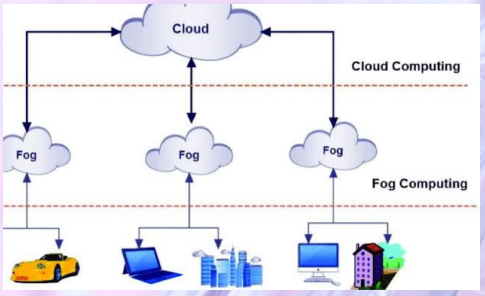
Byte Quest

Department of CSE

3D PRINTING TECHNOLOGY

GVPP

EMOTIONAL AI



FOG COMPUTING

Department Vision

To be a center for academic excellence in the field of Computer Science and Engineering education to enable graduates to be ethical and competent professionals.

Department Mission

To enable students to develop logic and problem solving approach that will help build their careers in the innovative field of computing and provide creative solutions for the benefit of society.

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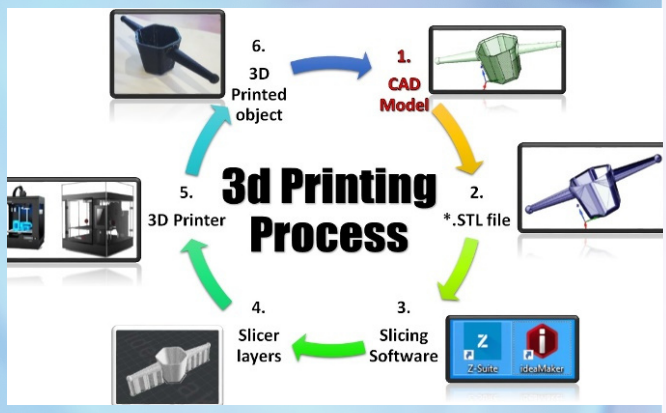
3D PRINTING TECHNOLOGY

3-d printing can create physical objects from a geometrical representation by successive addition ofmaterial . 3-d printing technology can print an object layer by layer deposition of material directly from a computer aided design (CAD MODEL).First commercialized of the 3-d printing processes in the year1980by Mr.charles hull. At present 3-d printing is in beginning state.



By using 3D printing technology, users can print many different types of objects such as knives, guns and dangerous items. Therefore, the use of 3D printing should be limited to only certain people to prevent terrorists and criminals bring guns without detected. At the same time, the people who get a hold of a blueprint will be able to counterfeit products easily. This is because, the use of 3D printing technology is simple, just sketching, and set the data in the machine-printed so 3D objects can generate.

GENERIC VISUAL PERCEPTION PROCESSOR [GVPP]

The generic visual perception processor (GVPP) has been developed after 10 long years of scientific effort. Generic Visual Perception Processor (GVPP) can automatically detect objects and track their movement in real-time. The GVPP, which crunches 20 billion instructions per second (BIPS), models the human perceptual process at the hardware level by mimicking the separate temporal and spatial functions of the eye-to-brain system.

The GVPP'S major performance strength over current-day vision systems is its adaptation to varying light conditions. Today's vision systems dictate uniform shadow less illumination and even next generation prototype systems, designed to work under “normal” lighting conditions, can be used only dawn to dusk. The GVPP on the other hand, adapt to real time changes in lighting without recalibration, day or light. But there are many situations where there is an inexistence of an algorithm or inability of a human to understand the algorithm. Even in these extreme cases GVPP performs well.

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EMOTIONAL AI

Humans have often sought the fantasy of having someone who “understands” them. Be it a fellow companion, a pet or even a machine. No doubt man is a social animal. Yet, this may not be the exact case in case of a man engineered machine or system. Although, machines are now equipped with AI that helps them beat us by sifting through scores of data and analyze them, provide a logical solution when it comes to emotional IQ this is where man and the machine draw the line. Before you get excited or feel low, AI is now in a race to integrate the emotional aspect of intelligence in its system. Now the question is, ‘Is it worth the hype?’

Emotional AI uses machine learning to detect and interpret emotions in text, audio, or video data. It employs a variety of technologies to collect and analyze data related to facial expressions, gestures, tone of voice, language use, and situational context. Emotional AI also incorporates psychological research as the basis on which interpretations are trained and reported
We are aware of the fact that facial expressions need not be the same as what one feels inside. There is always a possibility of disconnect by a huge margin. Assuming that AI can recognize these cues by observing and comparing it with existing data input is a grave simplification of a process that is subjective, intricate, and defies quantification.A smile can mean genuine happiness, enthusiasm, trying to put a brave face even when hurt or an assassin plotting his next murder. This confusion exists even in gestures too. Fingers continuously folding inwards the palm can mean ‘Come here’ at some places while at other places it means ‘Go away’. This brings another major issue in light: cross-cultural and ethnic references. An expression can hold a different meaning in different countries.

If we must opt for upgrading AI with emotional intelligence and unassailable, we must consider the exclusivity of the focus groups who are used to train the system. AI has to understand rather than be superficially emotional. Hence the AI has to be consumer adaptive just like humans. We need to bring out the heterogeneous interpretation in the way humans express their emotions. At the office, we have to understand how emotionally engaged the employees are Whether it is the subjective nature of emotions or discrepancies in emotions, it is clear that detecting emotions is no easy task. Some technologies are better than others at tracking certain emotions, so combining these technologies could help to mitigate bias. Will there come a time when Chitti from “Robo” or Chappie, the police robot become a reality? Is there a possibility for someone like Samantha, from “Her” understands and soothes us? Let’s at least hope that there is no Ultron working against us to overtake the world!

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FOG COMPUTING

Fog networking complements doesn't replace cloud computing; fogging enables short-term analytics at the edge, while the cloud performs resource-intensive, longer-term analytics. Although edge devices and sensors are where data is generated and collected, they sometimes don't have the compute and storage resources to perform advanced analytics and machine learning tasks. Though cloud servers have the power to do this, they are often too far away to process the data and respond in a timely manner.

Fog computing is a decentralized computing infrastructure in which data, compute, storage and applications are located somewhere between the data source and the cloud. Like edge computing, fog computing brings the advantages and power of the cloud closer to where data is created and acted upon. Many people use the terms fog computing and edge computing interchangeably because both involve bringing intelligence and processing closer to where the data is created. This is often done to improve efficiency, though it might also be done for security and compliance reasons.

The fog metaphor comes from the meteorological term for a cloud close to the ground, just as fog concentrates on the edge of the network. The term is often associated with Cisco; the company's product line manager, Ginny Nichols, is believed to have coined the term. Cisco Fog Computing is a registered name; fog computing is open to the community at large.

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