BYTE QUEST

Vasavi College of Engineering
Department of Computer Science and Engineering

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Byte Quest is the article published by the CSE dept of Vasavi College of Engineering regarding the latest innovative Technologies and Software that have been emerged in the competitive world. The motto of this article is to update the people regarding the improvement in technology. The article is designed by the active participation of students under the guidance of faculty coordinators.

☐ Good, bad or indifferent if you are not investing in new technology, you are going to be left behind.

-Philip Green

☐ Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.

-Stewart Brand

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MACHINE LEARNING IN MEDICINE

The Nipah virus is a deadly virus which can at times prove to be fatal to the infected body. There was a breakout of the infection of this virus in Kerala which caused a panic. The next step to tackle the situation can only be done by analysis of infection. It primarily is caused by bats and pigs. The species of bats which cause this infection was carried out using Machine Learning algorithms. It primarily included the food habits, natural traits, geographical location and niche of bat species. The Kerala doctors along with foreign programmers came to analyze 523 came to analyze 523 bat species to bring out11 species which are known to be carriers according to the conclusions. Thus the modern technology has enabled us to make quick response to fatal challenge.

The ability of convenient approach where the inference is proved by a program helps to save time, resources and manpower. The world awaits more surprising and supportive contributions from AI and Machine Learning which are to reshape the world.

R ABHINAV REDDY(CSEA 2/4)

TYPING WITH YOUR BRAIN

Facebook's Research Labs (FRL) has issued an an update on the company's ambitious project where people could type straight from their brains to a computer or smartphone. In the latest update Facebook has revealed how researchers at the University of California San Francisco (UCSF) who are working with the company, were able to detect intended speech in real-time from brain activity. The ultimate goal for Facebook is to create a system that can let user's type 100 words per minute with their brain. Existing brain-computer interface systems require sensors to be implanted to the brain, which is far from ideal. Facebook eventually wants to push for a system that does not require surgery. The research showed that the brain-computer interface was able to decode the


words from the participants in real-time. Previously it would take researchers weeks or months to decode mapped brain activity. Researchers used machine learning algorithms with "refined phonological speech models" to decode words. As researchers note, the algorithm is still limited in the number of words and phrases it can recognize. Going forward, the idea is to reduce the error rates.

MAHABOOB ALI(CSEA 2/4)

ELON MUSK'S MIND-MACHINE INTERFACE

Neuralink showcases sensor that can be implanted in brains. EnterpreneurElon Musk the CEO of SpaceX, Tesla revealed his secretive Neuralink which links brain with computer and hopes to begin testing on people by next year. Mr.Musk has long contended that a neural lace meshing minds with machines is vital if people are going to avoid being so out-paced by Artificial intelligence that, under the best of circumstances, humans would be akin to "house cats". Neuralink unveiled an early version of a tiny sensor with hair-thin strands that could be implanted in a brain through a small incision by a robot built for the high-precision task. They are tiny electrodes and the robot is delicately implanting them and there could be thousands of the electrodes connected to a brain which are not going to be stressful to put in; will work well, and is wireless.
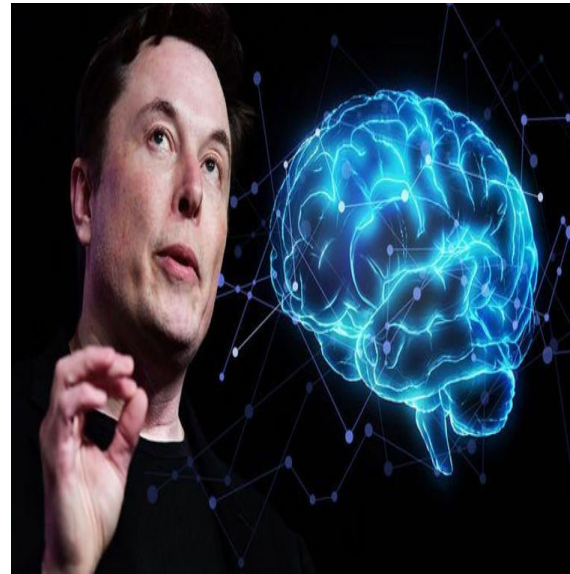
Wireless communication: The chip will communicate wirelessly with an earpiece, which relays information to a smartphone application, according to neuralink. An early focus of the team is using the technology to address brain diseases and paralysis, but the longer aim is to make implants so safe, reliable and easy that they could be elective surgery options for people seeking to enhance their brains with computing power.

SHRUTI(CSE-B 2/4)