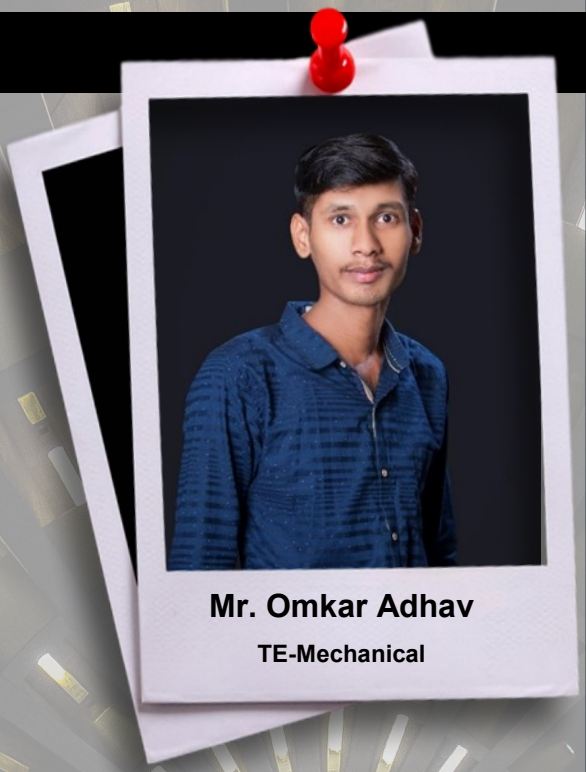
"QUANTUM COMPUTING"



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What if we got a way to time travel by the means of computers? But, as we know, time travel is not possible. But what if time travel is made possible in another way? In quantum universe? A quantum universe is the universe in itself. But for travelling in quantum universe, we have to reduce ourselves to the Planck's length. Or ese we have to built a quantum tunnel. For that we need to learn about quantum related theories or concepts. Today we are going to discuss about an underrated, but astonishing concept QUANTUM COMPUTING. So first of all, what is quantum computer? Can we really open gates to time travel? Well, that's another topic. Let's get over our topic.

An ideal quantum computer can break the encryption standards we use today by finding prime factors of a large integer in just minutes instead of the thousands of years it would take for a classical computer to do. But before you start to panic, while we have real quantum hardware today. it's not quite powerful enough to do that just yet. However, technologies are advancing faster than ever. The cell phones we have today are more Powerful than the mainframes that we used to send People to the moon, And the researchers believe that we will soon be entering an era of quantum advances where quantum computers will be used to accelerate classical computers, just like GPUs.

A quantum computer does not use the simple and 1 bit, Instead, it uses qubits. Qubits can be a 0, a 1, or any linear combination of the two.

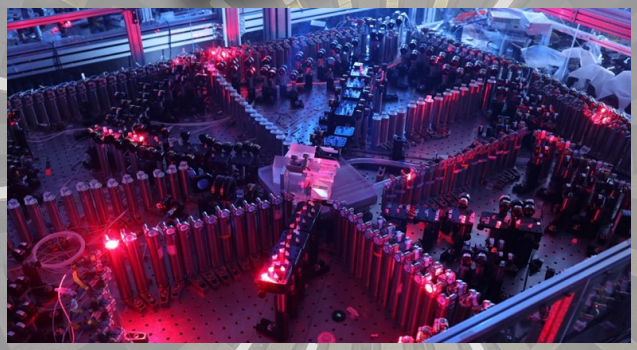

Fig. Quantum computing
(Ref. https://global.chinadaily.com.cn)

This spectrum of states is what we called a superposition.

Our next topic is about gates. Similar to classical computers, we use - we string together qubits using a construct called gates that can alter the states of qubits into circuits. Then we can use Hadamard gate, or H gate for short, to put it in a superposition between 0 and 1. And, of course, you can have multiple qubits with multiple gates in a circuit. For the circuit will be useful, at some point that you need to read about its outputs.