

Quantum computing to benefit giant industries in 2020



Understanding quantum computing and its role in development

Quantum computers can spur the development of breakthrough technology for various industries. In medical science, the machine learning methods in quantum computers detect illnesses and diagnose them sooner, provide accurate medications to save lives, make efficient devices with hyper-connectivity and set to algorithms that can direct financial strategies.

Quantum computing enables quantum mechanical processes to superposition to perform computations that can quickly resolve the issues for larger datasets which otherwise for the conventional computers would take much longer to accomplish.

After years of experimentation, 2020 has come with advances in quantum computers and its cryptography by merging with technology that can be commercialised for businesses.

Latest developments in quantum computing – a new way of thinking about calculations.

Rise to a competitive market for adapting quantum computing

The innovation and benefits of quantum computing has influenced the investors in various fields. Be it the government body or giant companies, everyone is pushing up to collaborate on quantum achievements. Various corporations are thriving to pace towards achieving quantum supremacy for the leading through in the market.

Google is one of the corporate companies who realise the profound effect a functioning quantum computer could have on its business and others. As head of Google's Quantum Artificial Intelligence lab Harmut Neven stated.

"Quantum computing is powerful because it harnesses Nature's propensity to explore all possible configurations of an object and all paths along which it can evolve".

Investment in grooming the skills for quantum computing is gearing up

Although universities for science and such other institutions incorporate quantum computing studies, academics also need to put efforts towards upscaling the methods for transition of quantum computing's advance technology to be commercialised and brought to market.

Besides the academics, Research and Development(R&D) for deriving progress in quantum computing, through its commercial application of noisy intermediate scale quantum computers. Increased investments to quantum computing technologies shall be driven by how useful such computers turn out and the problems they would be able to resolve.

Quantum-safe solutions will play a major role for encryption to 5G devices

With the advent of 5G network devices, data can dramatically cross networks in no time. Amid this, personal data leakage can be a major threat. 5G networks can easily cause massive increase in number of connected devices and sensors. To secure the data breaches and theft, quantum computing provides quantum safe solutions that play a significant role for protection and security.

Challenges

Investors get influenced towards novelty, innovation and interesting perspectives. So, even if quantum computers can outdo the conventions computers and beat them with more effective technology, the breakthrough can only be successful if it can resonate to today's problems. The rest of the society would then be directed towards the same.

Working along with the vision, imagination and funding of society is a major hurdle to quantum computing besides its differing technical hurdles. The real world advantages of quantum computers are difficult to explain as the classical computers do hold its maturity intact.

But, if the quantum wave arrives, it would bring a profound impact on development as a whole as a move from abacus to silicon computing.