

transform many industries. However, building and programming these robots requires a deep understanding of electronics, programming, and mechanics. With the right skills and knowledge, engineering students can play an important role in the development of these exciting new technologies.

References

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QUANTUM COMPUTERS AND THEIR POSSIBILITIES

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The first quantum computer was created by a research team led by physicist David Deutsch at the University of Oxford in 1985. Deutsch's proposal for a quantum computer was based on the theory of quantum mechanics, which describes the behavior of particles at the atomic and subatomic level.

Quantum computers represent a significant breakthrough in the field of computing. Unlike classical computers, quantum computers operate on the principles of quantum mechanics, which allows them to perform certain computations much faster and more efficiently.

A quantum computer is a device that uses the principles of quantum mechanics to perform computations. It uses quantum bits or qubits, which can

exist in multiple states simultaneously. This allows a quantum computer to perform certain computations much faster than classical computers.

7 companies are currently developing quantum computers. The most famous of them are Google, Microsoft and IBM. IBM has created a 53-qubit quantum computer that is accessible through their cloud platform and provides a quantum software development kit. In 2019, Google accomplished "quantum supremacy" with their own quantum computer. Microsoft - Developing a scalable quantum computer and has created its own quantum programming language, Q#.

Quantum computers have the potential to revolutionize many fields. Quantum computers, for instance, can be utilized for tackling intricate optimization problems, such as finding the shortest route between multiple points. This has applications in logistics and transportation.

Quantum computers can also be used for cryptography. Quantum cryptography is more secure than classical cryptography because it is based on the principles of quantum mechanics.

Another potential application of quantum computers is in drug discovery. Quantum computers can simulate the behavior of molecules, which can be used to identify potential drug candidates.

Although quantum computers hold great potential, there are still numerous challenges that must be addressed. Decoherence is the term used to describe this phenomenon, and it poses a significant challenge in the development of quantum computers. One of the most pressing challenges in quantum computing is constructing a computer with sufficient qubits to enable practical computations. Currently, the most powerful quantum computers have only a few hundred qubits, which is not enough for many applications.

Another challenge is maintaining the coherence of the qubits. Quantum systems are very fragile, and any interaction with the environment can cause the

qubits to lose their coherence. The process of decoherence, which presents a significant hurdle in the development of quantum computers, is well-recognized.

Quantum computers represent a significant breakthrough in the field of computing. They have the potential to revolutionize many fields, including optimization, cryptography, and drug discovery. Despite the potential of quantum computers, numerous challenges must be addressed before they can achieve widespread use. Despite these challenges, the possibilities and potential of quantum computers are truly remarkable.

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STUDYING FOR A SOFTWARE ENGINEER AT BNTU

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Belarusian National Technical University (BNTU) is a prestigious institution that offers a comprehensive curriculum for aspiring software engineers. The university's program is designed to provide students with a strong foundation in computer science and programming, making them well-equipped to enter the workforce upon graduation.

One of the unique aspects of studying programming at BNTU is the university's practical approach to education. The program includes numerous practical assignments and projects, allowing students to gain hands-on experience in software development and apply their knowledge in real-life situations. This approach enables students to develop a practical understanding