R&D Outsourcing

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Telemedicine

What is telemedicine?
Telemedicine is a way of providing medical services at a distance using modern technologies and special equipment. This is not a separate medical science, but only an auxiliary tool for diagnosing, treating and preventing diseases. The subject of telemedicine is the transfer of medical information between remote locations where patients, doctors, other health care providers are located, between separate medical institutions. Telemedicine refers to the use of telecommunications to connect medical professionals with clinics, hospitals, primary care physicians, patients at a distance for diagnosis, treatment, consultation and continuous learning. Technologically, this kind of telecommunications should provide direct transmission of medical information in various formats (medical history, laboratory data, x-rays and CT results, video images, ultrasound, etc.), as well as real-time video conferencing between medical institutions or a doctor and patients [1].

The use of telemedicine makes it possible, for example, to provide advisory medical services in areas where patients do not have the opportunity to receive the help of narrow specialists directly in a medical institution. But even in huge metropolitan areas and developed countries, telemedicine is no less important. Thanks to it, treatment costs are significantly reduced, the quality of diagnostics is improved, and the possibility of remote health monitoring is realized. This is especially important for patients with chronic diseases and the elderly.

The global telemedicine market can be segmented according to several criteria, including:

The nature of remote interaction (clinic - clinic, clinic - patient's home)
Technological parameters of interaction (monitoring systems, communication channels and communications, measuring instruments and sensors, video conferencing systems, databases, mobile and wearable technologies, etc.)
Purpose of application (medical education, diagnosis, monitoring, consultation, treatment)
Depending on this, different approaches to the design and development of software solutions are used and, accordingly, different tools. But since these segments are closely intertwined, the developer must have skills and expertise in a wide variety of development areas, including experience with embedded solutions, mobile, cloud technologies and protocols specific to the medical industry.

Telemedicine technologies
Information technologies providing:

Remote interaction of medical workers among themselves, with patients and (or) their legal representatives
Identification and authentication of specified persons
Documenting their actions during consultations, consultations, remote medical monitoring of the patient's health

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