

Radiomics Market - Global Industry Size, Share, Trends, Competition, Opportunity and Forecast, 2018-2028 Segmented By Modality (Magnetic Resonance Imaging (MRI), Computed Tomography (CT), Positron-Emission-Tomography (PET), Others), By Image Type (2D v/s 3D), By Technology (Engineered Features v/s Deep Learning), By Application (Nuclear Medicine, Medical Imaging, Precision Medicine, Oncology, Others), By Region and Competition

Market Report | 2023-03-01 | 118 pages | TechSci Research

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Report description:

Global Radiomics Market is projected to grow at a formidable rate in the forecast period, 2018-2028. This can be attributed to the growing prevalence of various chronic diseases such as cancer which require accurate diagnosis and treatment. According to the global cancer observatory, the total number of new cancer cases reported in 2020 was around 19,292,789. Out of this, 10,065,305 new cancer cases were reported in males, and in females were around 9,227,484 in 2020. The rising need of improving disease diagnosis, prognosis, and clinical decision support is expected to create new prospects for the growth of global radiomics market. Radiomics is a quantitative method of approaching medical imaging that seeks to improve the data already available to doctors through sophisticated mathematical analysis. Using analysis techniques from the field of artificial intelligence, radiomics evaluate textural information by mathematically extracting the spatial patterns of signal intensities and pixel interconnections. The potential of radiomics to improve clinical decision-making has been highlighted by numerous research from various imaging domains that have been published so far. The numerous technical parameters impacting the retrieved radiomic properties are the primary cause of the numerous significant hurdles the area is currently facing.

Increased Digitization and Use of Artificial Intelligence in the Healthcare Industry

The digitization of information, produced during normal clinical procedures has increased steadily in medicine over the past few decades, much like it has in many other spheres of human endeavor. As more medical records were made available in digital form, ever-evolving, and more complex software was created to analyze them. At the same time, research on artificial intelligence (AI) has long advanced to the point where its techniques and software tools are sophisticated enough to leave computer science departments and find use in an expanding number of fields. As a result, the medical industry has seen a significant rise in the use of AI applications in recent years. These apps are intended to help clinical decision-making and simplify the repetitive tasks that physicians must perform daily.

Radiomics enhances the available data to physicians with the help of modern mathematical analysis. The concept of radiomics has been most widely implied in the field of oncology basically on the assumption of the presence of certain disease-specific information not perceptible by the human eye in biomedical images.

Different modalities can aid in radiomics analysis on medical images, employing the potential additive value of imaging information retrieved from positron-emission-tomography (PET), computed tomography (CT), and magnetic resonance imaging (MRI), rather than assessing each modality on its own, thus permitting an integrated cross-modality approach. Therefore, the integration of AI into the healthcare industry will fuel the global radiomics market in the future.

Increased Dependency on Radiology for Medical Diagnosis

Medical Imaging procedures facilitate diagnosis and pave an approach for the treatment of adults as well as children and lately, there has been a remarkable rise in the use of these techniques.

Between October 2018 and September 2019, about 45.2 million imaging tests were carried out in England, according to a report by the National Health Service (NHS). Out of these, 3.58 million imaging tests were just conducted in September 2019. This escalation can be attributed to increased demand by physicians and patients, technological improvements, and better financial conditions for people. Computed Tomography or CT scans have seen a rise of about 8% in the past ten years. It has been revealed by a survey that the rate of CT scans being conducted for respiratory diseases in the emergency department has increased by four folds between 2001 and 2010.

Technological advancements have led to more physicians calling for CT scans and MRIs even for conditions that could be investigated with simpler imaging techniques. An improved view of pathologies can be obtained from a CT scan than a plain radiograph. For example, the best imaging technique suitable for identification and follow-up on pulmonary embolism is CT pulmonary angiography. The chief reason for this is its fast speed and high resolution. CT scan has greater sensitivity and specificity along with enhanced visualization due to which it has the potential to identify small opacities that might have been skipped during chest X-rays. Also, it can offer improved views of some regions such as lung lingula and lung bases. This increased dependency on radiology for medical diagnosis is offering lucrative growth opportunities for the global radiomics market. Growing Geriatric Population and Associated Diseases

With advancing age, the risk of contracting a disease also increases. Nearly 80% of elderly people in the United States have at least one chronic disease, according to the Centers for Disease Control and Prevention (CDC). Furthermore, it has been estimated by the American Medical Association (AMA) that about 60% of individuals with an age of 65 or above will be living with more than one chronic condition by the year 2030. Therefore, the rise in the geriatric population in the world will fuel the necessity for better healthcare facilities and modern treatment options as well as medications.

The increased incidences of chronic diseases worldwide will drive the demand for modern diagnostic and treatment options. Radiology techniques or medical imaging procedures such as Magnetic Resonance Imaging (MRI), Computed Tomography (CT) scans, ultrasound, and angiography are principally deployed for clinical procedures carried out for several cancers. Also, with a rise in unhealthy lifestyle habits and a rising elderly population, the incidence of cancer is on a surge across several countries, thereby raising the acceptance of novel technologies like radiomics. Hence, the growing geriatric population along with rising cancer cases will propel the global radiomics market.

Market Segmentation

Global radiomics market can be segmented based on modality, image type, technology, application, region, and company. Based on modality, the market is segmented into magnetic resonance imaging (MRI), computed tomography (CT), positron-emission tomography (PET), and others. Based on image type, the market is split into 2D and 3D. Based on technology, the market is

divided into engineered features and deep learning. Based on application, the market is fragmented into nuclear medicine, medical imaging, precision medicine, oncology, and others.

Company Profiles

Some of the leading players operating in the global radiomics market are Radiomics.io (Computational Imaging & Bioinformatics Lab), Radiomics Bio (Belgium), Health Innovation Ventures (HIV), Sophia Genetics SA, HealthMyne Inc, Oncoradiomics, and ptTheragnostic BV, among others.

Report Scope:

In this report, global radiomics market has been segmented into the following categories, in addition to the industry trends which have also been detailed below: - Radiomics Market, By Modality: o[Magnetic Resonance Imaging (MRI) o
Computed Tomography (CT) o
Positron-Emission-Tomography (PET) o Others - Radiomics Market, By Image Type: o∏2D o[]3D - Radiomics Market, By Technology: o
Engineered Features o
Deep Learning - Radiomics Market, By Application: o∏Nuclear Medicine o
Medical Imaging o
Precision Medicine o<u></u>Oncology o[]Others - Radiomics Market, By Region: o<sub>
North</sub> America -∏United States Mexico Canada o∏Europe -[]France -[]Germany - United Kingdom - Italy -[]Spain o[]Asia-Pacific -[]China -[]India -[]apan South Korea Australia o
South America -∏Brazil Argentina

- [Colombia o [Middle East & Africa - [South Africa - [Saudi Arabia - [UAE - [UAE - [Kuwait Competitive Landscape Company Profiles: Detailed analysis of the major companies present in the global radiomics market. Available Customizations: With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report: Company Information

- \Box Detailed analysis and profiling of additional market players (up to five).

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