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Patent Search

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Abstract:

The proposed invention is an AI-assisted image recovery system for low-dose CT scans, which aims to improve the quality of medical imaging while reducing radiator for patients. The system comprises an image processing module and a machine learning module, which work together to apply noise reduction techniques and correct CT scan image data. The system is highly efficient, cost-effective, and customizable, and has the potential to transform the field of medical imaging and diagnostic applications. This abstract summarizes the key features and potential applications of the proposed invention.

Complete Specification

Description:The field of invention for "AI-assisted Image Recovery for Low-Dose CT Scans" would be medical imaging technology. Specifically, the invention pertains to the use of artificial intelligence to reconstruct high-quality images from low-dose computed tomography (CT) scans. This technology could be used in a range of medical applications, from diagnosing and monitoring diseases to guiding surgical procedures. The invention would improve the accuracy and efficiency of medical imaging, potentially reducing healthcare costs and improving patient outcomes.

Background of the invention:

Medical imaging plays a crucial role in modern healthcare, enabling doctors to diagnose and monitor a wide range of diseases and conditions. One of the most widely used medical imaging techniques is computed tomography (CT), which uses X-rays to create detailed images of the body's internal structures.

However, CT scans can also expose patients to ionizing radiation, which can increase the risk of cancer and other health problems. To mitigate this risk, radiologists and technicians often use lower doses of radiation when performing CT scans. While this reduces the patient's exposure to radiation, it can also lead to lower quality images with decreased diagnostic accuracy.

To address this challenge, researchers and medical professionals have been exploring various techniques to improve the quality of low-dose CT scans. One promising approach is the use of artificial intelligence (AI) and machine learning (ML) algorithms to reconstruct high-quality images from low-dose CT scans.

By leveraging the power of AI and ML, researchers can train algorithms to learn how to reconstruct images from low-dose scans with greater accuracy and precision. These algorithms can analyze large volumes of image data, identifying patterns and features that are difficult for humans to discern.

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