

عنوان مقاله:

Comparison of machine learning algorithms and deep learning in the diagnosis of liver cancer

محل انتشار:

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خلاصه مقاله:

Today, liver cancer is spreading quietly and at an alarming rate and is the fourth leading cause of death worldwide, many people have no symptoms in the early stages of the disease. The liver plays an important role in maintaining the health of the body because it is one of the largest organs in the abdomen. If the disease is diagnosed late, people can live only one year. Advances in artificial intelligence have inspired the development of algorithms in the field of cancer. Due to the advancement of technology, doctors and specialists can treat diseases without surgery and with image processing, which is a technique with the help of mathematical operations and any kind of signal processing that helps to better diagnose cancers, every year out of millions. People lose their lives. Prevention with correct diagnosis The aim of this paper is image processing for liver cancer diagnosis using deep learning (DL) and deep machine (ML). Segmenting the liver is difficult, and separating the tumor from the liver adds a bit of difficulty. Machine learning and deep learning algorithms are used for pre-screening, diagnosis and management of liver cancer patients through diagnostic image analysis and responsible for liver segmentation. Computed tomography images of the tumor are classified between metastases and cholangiocarcinoma and LiTS. In the deep learning model, it shows the relationship with accuracy, dice similarity coefficient and feature parameters compared to existing well-known algorithms and it is well adapted to different sets. The similarity coefficient of dice in this model is about 90% and it shows the superiority of this method.

کلمات کلیدی:

Liver cancer, image processing, deep learning, deep machine, tomographic images

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