عنوان مقاله:

Application of neural networks in medical diagnosis and imaging

محل انتشار:

دوازدهمین کنفرانس بین المللی تحقیقات پیشرفته در علوم، مهندسی و فناوری (سال: 1402)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Atefeh Abedi Jabeli - *Department of Electrical and Biomedical Engineering, Faculty Engineering and Technology, Shahid Ashrafi Esfahani University, Isfahan, Iran*

Hamidreza Shirzadfar - *Department of Electrical and Biomedical Engineering, Faculty Engineering and Technology, Shahid Ashrafi Esfahani University, Isfahan, Iran*

خلاصه مقاله:

Due to their unique abilities neural networks have come to the aid of medical science and in cases where this science has not yet been able to resolve its inadequacies alone they offer great help in resolving its disabilities. Reducing costs the highest confidence and accuracy of doctors in their decisions making more widely used medical devices are among the services that neural networks have done for doctors. Equipping medical science with smart tools in the diagnosis and treatment of diseases can reduce the mistakes of doctors and loss of life and money. Recent advances in the field of biomedical engineering have made medical image analysis one of the top research and development fields. One of the reasons for this progress is the use of machine learning techniques for analyzing medical images. Deep learning is successfully used as a tool for machine learning where a neural network is able to automatically learn features. This is in contrast to methods where traditional hand-crafted features are used. The selection and calculation of these features is a challenging task. Among deep learning techniques deep convolutional networks are actively used for medical image analysis. It includes application areas such as segmentation normality detection disease classification computer aided diagnosis and recovery. Image analysis using deep convolutional networks is .presented. The challenges and potential of these techniques are also highlighted

کلمات کلیدی:

Artificial intelligence, Deep learning, Artificial Neural Networks, Convolutional Neural Networks, Medical Image Recognition