



Special Issue Reprint

Deep Learning for Pathology Detection and Diagnosis in Medical Imaging

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Severe pathologies, such as the diffuse liver diseases or tumors, can lead to the significant degradation of the human health and sometimes to lethal stages. The most reliable methods for the diagnosis of these affections, such as the classical biopsy or surgery, are invasive and dangerous. Advanced computerized methods are urgently needed to reduce invasiveness and enhance the information derived from medical images as much as possible by unveiling their subtle aspects, conducting to a virtual biopsy. Computer Vision and Machine Learning can be successfully employed to achieve this target. Thus, advanced image analysis combined with conventional machine learning, as well as the deep learning techniques, can lead to a highly accurate automatic diagnosis process. The corresponding features, together with the classification, segmentation, fusion of multiple image modalities, and 3D reconstruction techniques, can be involved in the achievement of appropriate 2D and 3D models for the considered affections, which are helpful in computer-aided diagnosis and surgery. The purpose of the special issue "Deep Learning for Pathology Detection and Diagnosis in Medical Imaging" is that of offering the opportunity to disseminate valuable and original results achieved in the corresponding field, surprising the latest, deep-learning techniques, eventually compared and combined with conventional methods.



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