

Title (en)

AUTOMATIC METHOD FOR SEGMENTATION OF A THROMBUS AND A LESION IN A THREE-DIMENSIONAL BRAIN IMAGE

Title (de)

AUTOMATISCHES VERFAHREN ZUR SEGMENTIERUNG EINES THROMBUS UND EINER LÄSION IN EINEM DREIDIMENSIONALEN HIRNBILD

Title (fr)

PROCÉDÉ AUTOMATIQUE DE SEGMENTATION D'UN THROMBUS ET D'UNE LÉSION DANS UNE IMAGE TRIDIMENSIONNELLE CÉRÉBRALE

Publication

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Application

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Abstract (en)

[origin: WO2023280708A1] One aspect of the invention relates to an automatic method for the segmentation of a thrombus and a lesion caused by the thrombus in a three-dimensional brain image, said method comprising the following steps: - supervised training of at least one primary recurrent artificial neural network in order to provide a lesion prediction from an image; - supervised training of at least one secondary recurrent artificial neural network in order to provide a thrombus prediction from an image; - using each trained primary recurrent artificial neural network on each image of a set of images obtained from the three-dimensional image, and merging the lesion predictions obtained in order to obtain a set of lesion segmentations: o if the set of lesion segmentations comprises at least one segmentation, selecting the widest segmentation as the lesion segmentation; - using each trained secondary recurrent artificial neural network on each image of a set of secondary images obtained from the three-dimensional image, and merging the thrombus predictions obtained in order to obtain a set of thrombus segmentations: o if the set of thrombus segmentations comprises at least one segmentation, selecting, as the thrombus segmentation, the segmentation corresponding to a proximity condition dependent on the lesion segmentation.

IPC 8 full level

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