1)

<https://link.springer.com/chapter/10.1007/978-3-319-70772-3_20>

This paper presents a novel deep learning model for multi-Class Alzheimer’s Disease detection and classification using Brain MRI Data. We design a very deep convolutional network.

2)

<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10134/101342E/Fine-tuning-convolutional-deep-features-for-MRI-based-brain-tumor/10.1117/12.2253982.short?SSO=1>

We fine-tuned a CNN initially trained on a large natural image recognition dataset (Imagenet ILSVRC) and transferred the learned feature representations to the survival time prediction task, obtaining over 81% accuracy in a leave one out cross validation.

3)

<https://www.sciencedirect.com/science/article/pii/S0165027008000381>

Non so se possa essere utile:

We present a cellular neuronal network (CNN) based approach to classify magnetic resonance images with and without hippocampal or Ammon’s horn sclerosis (AHS) in the medial temporal lobe. A CNN combines the architecture of cellular automata and artificial neural networks and is an array of locally coupled nonlinear electrical circuits or cells, which is capable of processing a large amount of information in parallel and in real time. Using an exemplary database that consists of a large number of volumes of interest extracted from T1-weighted magnetic resonance images from 144 subjects we here demonstrate that the network allows to classify brain tissue with respect to the presence or absence of mesial temporal sclerosis. Results indicate the general feasibility of CNN-based computer-aided systems for diagnosis and classification of images generated by medical imaging systems.

4)

<https://onlinelibrary.wiley.com/doi/full/10.1002/mrm.22147>

Non sono riuscito a scaricare il pdf ma dovrebbe esserci utile

5)

<https://ieeexplore.ieee.org/abstract/document/7555958>

Usano rete sia 2D che 3D

This study explores the applicability of the state of the art of deep learning convolutional neural network (CNN) to the classification of CT brain images, aiming at bring images into clinical applications. Towards this end, three categories are clustered, which contains subjects' data with either Alzheimer's disease (AD) or lesion (e.g. tumour) or normal ageing. Specifically, due to the characteristics of CT brain images with larger thickness along depth (z) direction (~5mm), both 2D and 3D CNN are employed in this research. The fusion is therefore conducted based on both 2D CT images along axial direction and 3D segmented blocks with the accuracy rates are 88.8%, 76.7% and 95% for classes of AD, lesion and normal respectively, leading to an average of 86.8%.