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Functional MRI (most related to visual area)

有关视觉方面的研究，建议关注 Stanford 的 Wandell 组的工作

http://vistalab.stanford.edu/

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Brain Connectome

两个专辑
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Machine Learning in Medical Imaging

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这是一个有关 AD 分类方面的专辑

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Deep Learning based Segmentation

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- Arxiv:Medical Image Analysis using Convolutional Neural Networks: A Review
- 1.
  Suggestive Annotation: A Deep Active Learning Framework for Biomedical Image Segmentation
  2.
  Deep adversarial networks for biomedical image segmentation utilizing unannotated images
  3. Automatic 3D cardiovascular MR segmentation with densely-connected volumetric convnets
  4.
  Deeply supervised network for automated segmentation of volumetric medical images
  5.

Integrating statistical prior knowledge into convolutional neural networks

计算机辅助诊断论文：
医学图像课程，计算机辅助诊断部分参考文献（5 篇）：

1、Deep Multi-instance Networks with Sparse Label Assignment for Whole Mammogram Classification（MICCAI 最新文章，关于整张图像的多实例分类学习。这项研究的背景是，各种医学图像中诊断病症存在时，如果出现一个正例，就可以认为图像的判定结果是“有疾病、阳性”；但“无疾病”的判定结果需要图像中所有的区块都没有出现正例才行。那这就是多实例学习的范畴。）
2、Deep Correlation Learning for Survival Prediction from Multi-modality Data（MICCAI 最新文章，多模态的深度相关学习）
3、Shen W, Zhou M, Yang F, et al. Multi-scale convolutional neural networks for lung nodule classification[C]//International Conference on Information Processing in Medical Imaging. Springer, Cham, 2015: 588-599.（田捷老师那边学生 2015 年的文章，用深度卷积网络来做肺结节的分类，现在来看其网络非常简单，但是比较经典，google 引用率 100，不失为一篇好的深度学习辅助诊断入门文章）
4、Litjens G, Kooi T, Bejnordi B E, et al. A survey on deep learning in medical image analysis[J]. Medical image analysis, 2017, 42: 60-88.（2017 年的一篇关于深度学习在医学图像上应用的综述，总结了大约 300 篇文章，并指出了相关医学图像处理任务所使用的方法。目前引用率为 205）
5、Nie D, Zhang H, Adeli E, et al. 3D deep learning for multi-modal imaging-guided survival time prediction of brain tumor patients[C]//International Conference on Medical Image Computing and Computer-Assisted Intervention. Springer, Cham, 2016: 212-220.（沈定刚老师组 2016 年的文章，深度学习，多模态数据，预测脑肿瘤患者的存活时间的，目前 google 引用率 20，文章思路经典清晰，应该也是一篇 比较好的入门论文。）

对相关文献进行综述，介绍 1-2 个具体方法，指出该方法的主要优点，另外思考，该方法有哪些不足。

脑功能连接网络方面的论文，NeuroImage 方面的一个专刊

http://www.sciencedirect.com/science/article/pii/S1571064514001080

这也是有关网络的一个讨论与总结，可以作为研讨课的一部分内容

http://www.cs.cmu.edu/~tom/10701_sp11/lectures.shtml

这是一个机器学习的课程网站，也可参考

http://www.braintumorsegmentation.org/

有关肿瘤分割的网站

https://github.com/shawnyuen/DeepLearningInMedicalImaging

Deep Learning in Medical Imaging

https://github.com/xinario/awesome-gan-for-medical-imaging

Awesome GAN for Medical Imaging

图谱

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功能和结构网络

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网络指标

4. Rubinov, M., and Sporns, O. (2010). Complex network measures of brain connectivity: uses and interpretations. NeuroImage 52, 1059-1069.

Rich club 分析

5. An anatomical substrate for integration among functional networks in human cortex;
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网络未来研究方向

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