阅读计划:

目前的不足

1.阅读deepLearing一书时，发现自己对相关数学知识掌握的不充分，基础知识还是没有熟练掌握。

2.缺乏python编程基础，需要补足对opencv，scikit-learn等库的使用。

自我规划

由于我还在上java培训班，一直到五月中旬，都没有完整的时间，所以我计划这段时间先利用闲散的时间补足数学知识，和python编程基础。

4月份-5月份：

1.阅读花书（deeplearning）和 machinelearning for opencv。补足基础知识，并写几个简单的机器学习项目，熟练掌握python及相关库。

2.阅读完综述的几篇文章，要对深度学习的基本算法和肿瘤分割领域的具体应用有一定了解。

6月份以后：

阅读完剩余文献，每周阅读数量循序渐进，对算法要有总结。

与老师保持联系，后续持续学习。

自我要求：

定期写读书笔记以及编程代码的整理。

分三类论文:

综述型

介绍图像分割的经典算法及在肿瘤分割这一具体领域的综述.

Image Segmentation Using Deep Learning: A Survey

Automated Brain Tumour Segmentation Techniques—A Review

Deep Learning Based Brain Tumor Segmentation: A Survey

经典算法论文:

FCN

Fully Convolutional Networks for Semantic Segmentation.

RNNs LSTM

Parallel Multi-Dimensional LSTM, With Application to Fast Biomedical Volumetric Image Segmentation

unet segnet

U-Net: Convolutional Networks for Biomedical Image Segmentation

SegNet: A Deep Convolutional Encoder-Decoder Architecture for Scene Segmentation

GAN

Semantic segmentation using adversarial networks

Multi-Scale and Pyramid Network Based Models

Pyramid Scene Parsing Network

R-cnn

Rich Feature Hierarchies for Accurate Object Detection and Semantic Segmentation

deeplab

DeepLab: Semantic Image Segmentation with Deep Convolutional Nets, Atrous Convolution, and Fully Connected CRFs

attention models

Attention to Scale: Scale-Aware Semantic Image Segmentation

算法落地:在肿瘤分割领域的应用

脑瘤(MRI核磁共振,CT),乳腺癌(超声波),肝脏

H-DenseUNet: Hybrid Densely Connected UNet for Liver and Tumor Segmentation From CT Volumes

Deep learning of the sectional appearances of 3D CT images for anatomical structure segmentation based on an FCN voting method

Combining Fully Convolutional and Recurrent Neural Networks for 3D Biomedical Image Segmentation

Multi-scale self-guided attention for medical image segmentation

RescueNet: An unpaired GAN for brain tumor segmentation

A two-stage approach for automatic liver segmentation with Faster R-CNN and DeepLab

Ensembles of Multiple Models and Architectures for Robust Brain Tumour Segmentation

Scalable Multimodal Convolutional Networks for Brain Tumour Segmentation

Brain tumour classification using two-tier classifier with adaptive segmentation technique

Supervised Learning based Multimodal MRI Brain Tumour Segmentation using Texture Features from Supervoxels

Automated Glioblastoma Segmentation Based on a Multiparametric Structured Unsupervised Classification

Lung tumour detection and classification using EK-Mean clustering

Liver lesion segmentation informed by joint liver segmentation