Deep Learning for Healthcare using Computer Vision

1. Utilize machine vision techniques to classify de-identified chest radiographs for misplaced endotracheal tubes, central lines, and pneumothorax.
2. Develop a deep learning model that can accurately classify an imaging sequences according to modality, body region, imaging technique, imaging plane, phase and type of contrast, and MR pulse sequence.
3. Evaluate a convolutional neural network model that can estimate skeletal maturity with accuracy similar to that of an expert radiologist and to that of current state-of-the-art feature-extraction-based automated bone age assessment models
4. Develop a deep-learning classifier for evaluating pediatric brain MRI
5. Use deep learning to predict "brain age" using MRI data
6. Investigate deep learning in "super human" imaging tasks including PE prediction on chest xrays and stroke detection on head CT
7. Develop a convolutional neural network model that can predict pathology/genomic information from imaging examinations in pediatric cancer
8. Using deep learning for rapid histopathology diagnosis in the operative setting
9. Deep learning to identify facial features from cross sectional imaging
10. Utilize a deep learning method for emergent imaging finding detection (multi-modality)
11. Investigate whether scanner-level deep learning models can improve detection at the time of image acquisition
12. Computer vision for CAD in FDG and bone scans
13. Automated fetal brain ultrasound diagnosis and evaluation with deep learning
14. Musculoskeletal tumor identification on plain films with histopathological confirmation with deep learning
15. Deep learning for imaging follow up in clinical trials
16. Real-time detection and diagnosis of video cystoscopy with deep learning

OTHER PROJECTS AND GIT HUB LINKS

1. https://github.com/kjw0612/awesome-deep-vision
2. https://github.com/luanfujun/deep-photo-styletransfer?utm_source=mybridge&utm_medium=blog&utm_campaign=read_more
3. https://github.com/ageitgey/face_recognition?utm_source=mybridge&utm_medium=blog&utm_campaign=read_more
4. https://github.com/lengstrom/fast-style-transfer?utm_source=mybridge&utm_medium=blog&utm_campaign=read_more

5. https://github.com/junyanz/iGAN?utm_source=mybridge&utm_medium=blog&utm_campaign=read_more
6. https://github.com/oarriaga/face_classification?utm_source=mybridge&utm_medium=blog&utm_campaign=read_more (MY FAVOURITE)