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Deep Learning Paper Review

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**Analysis & Introduction**

Computer aided diagnosis using AI to help predict a more efficient diagnostic; Deep Learning is the most used method for Computer Vision for medical imaging problems tasks using classification. It has been used for lung cancer detection, retinal disease detection and any more medical fields. It has been implemented using black-box that would not allow it to achieve deployment in the clinics; being used for classification of 3D and 2D images. It has been used for autonomous driving where the black-box models affect the use of deep learning in the domain. As it also has been shown that the impact of network decision is reliable enough for declaring the importance of a neuron that is used for a given task.

**Approaches**

Several models have been proposed depending on the characteristic of the method, since different taxonomies and classification varies. Model specific and Model Agnostic are based on the parameters of the individual model that use neural networking explainers. The Global Model and Local Methods are applicable, they are applicable and design methods can be the reason for particular prediction and to a single outcome. Pre-Model and Post-Model do not depend on any model architecture. Surrogate Methods and Visualization Methods are two different models as an ensemble which are used to analyze other black-box methods.

**Explain Methods & Application**

There are many types of approaches to explain deep learning results, the methods for standard attribution are based on those methods. The development of these methods contributed to the classification of the problem, the arrangement of the was ideal since it made a positive contribution to the activation of the targeted neurons. The medical images are trained by suitable neural network architecture without the added complexity.

**Imaging**

The study of comparing the robust various attribution based methods for Brain imaging and Retinal imaging using CNN classification andmodel prediction. The L2 norms between the two averages attribution maps to multiple ateriation in the model, comparing baseline occlusion since it covers a larger area. The prediction of the heat maps are used when model prediction was used and the grading confidence increased for both predictions. Using different models for detecting choroidal neovascularization and robust optical coherence. THere are skin Imaging and Ct Imaging, X-ray Imaging that are methods with attributes that has been presented to explain segmentation of tumor, and X-ray can be used to determine that kind of disease you have specially when it became really good for Covid-19 and skin images for skin color where the last two layers were visualized by the CNN for activations to the input size.

**Conclusion**

There are many models for deep learning, especially in the medical field. Understanding that each model and deep learning algorithm specialty are extremely important; specially when determining that features are responsible for different tasks, it will help better understand and be able to be judged in a particular way when seeing the prediction.