

**HIPACAD: AN ASSISTANT FOR HISTOPATHOLOGICAL
CARCINOMA DETECTION USING EFFICIENT DEEP
CONVOLUTIONAL NETWORKS**

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Abstract

As far as this world is concern cancer affects one out of eight around worldwide. It is diagnosed by detecting the malignancy of the cells of cancer effected parts or tissues. Modern medical image processing techniques work on histopathology images captured by a microscope, and then analyze them by using different algorithms and methods. Machine learning algorithms are now being used for processing medical imagery and pathological tools. Manual detection of a cancer cell is a tiresome task and involves human error, and hence computer-aided mechanisms are applied to obtain better results as compared with manual pathological detection systems. According to the technologies we can find an effective and efficient way to fix the human errors in nature. In profound learning, this is commonly done by extricating highlights through a convolutional neural system (CNN) and afterward arranging utilizing a completely associated organize. Deep learning is extensively utilized in the medical imaging field, as it does not require prior expertise in a related field. The proposed method is to train a model for histopathologic cancer detection using a relatively smaller backbone and without ensembling multiple networks while focusing more on reducing overfitting (Test Time Augmentation, 2-stage training) and smoothing weights (Calculating running average of weights). This method not only gives a light weighted model but also minimizes the training time while delivering a comparable result to state-of-the-art works. Right now, have prepared a convolutional neural system and gotten an expectation precision of AUC Score of 97.71.

Keywords: Malignancy, histopathology, pathological, Feature Extraction, Classification