Literature Survey

S.NO.	AUTHOR	PAPER	CONTENT	LIMITATIONS
1.	Lifeng Qiao, Ying Zhu, Hui Zhou	Diabetic Retinopathy Detection Using Prognosis of Microaneurysm and Early Diagnosis System for Non-Proliferative Diabetic Retinopathy Based On Deep Learning Algorithm.	A Convolutional neural network that depends deep learning for analysing the presence of microaneurysm in fundus image and GPU for image detection and segmentation for high performance and low latency	Different features including texture, color, size on fundus images make it difficult to identify microaneurysms.
2.	Juan Shan , Li Lin	A Deep Learning Method for Microaneurysm Detection in Fundus Images	Deep Learning have used for automatic feature extraction and classification problems. A stacked sparse autoencoder is presented for microaneurysm detection in fundus images.	Small size of MA lesions and low contrast between lesion and its retinal background.
3.	V. Gulshan, L. Peng, M. Coram, M. C. Stumpe, D. Wu, A. Narayanaswamy	Development and validation of a deep learning algorithm for detection of diabetic retinopathy	Deep convolution neural network trained using a dataset of 128175 images, which were graded 3 to 7 times for diabetic retinopathy, diabetic macular edema.	Feasibility of grading is less than manual grading.
4.	Muhammad Mateen, Tauqeer Safdar - Malik, Shaukat Hayat, Musab Hameed, Song Sun, Junhao Wen	Deep Learning Approach for Automatic Microaneurysms Detection	A Softmax classifier for classification whereas back-propagation is used to calculate the cross-entropy loss. CNN plays a major role for detection. Also, Data pre-processing is done using grayscale image conversion and shade correction approach.	The whole process is long and computationally expensive.
5.	Balint Antlal, Andras Hajdu	An Ensemble-based System for Microaneurysm Detection and Diabetic Retinopathy Grading	Ensemble based system to use it as a microaneurysm detector. It gathers close microaneurysm candidates of individual detectors and apply a voting scheme on them.	Proper Screening system should contain other components which is the barrier to performance.