**LITERATURE SURVEY**

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| TITLE | AUTHOR YEAR AND NAME OF TRANSACTION | DESCRIPTION |
| “Diabetic Retinopathy Detection by Extracting Area and Number of Micro-aneurysm from Colour Fundus Image.” | [Shailesh Kumar](https://ieeexplore.ieee.org/author/37086092855) ECED MNNIT Allahabad, Allahabad, India [Basant Kumar](https://ieeexplore.ieee.org/author/37397709500) ECED MNNIT Allahabad, Allahabad, India.  [2018 5th International Conference on Signal Processing and Integrated Networks (SPIN)](https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8447178). | * In this paper, there are two features namely; number and area of Micro-aneurysms. * For detection of micro-aneurysms, principal component analysis (PCA), contrast limited adaptive histogram equalization (CLAHE), morphological process, averaging filtering have been used. * The sensitivity and specificity of DR detection system are observed as 86% and 90% respectively.   DRAWBACK: only used to find micro-aneurysms.Other symptoms are not detected. |
| “Diagnosis of Diabetic Retinopathy by Using Image Processing and Convolutional Neural Network.” | Bilgisayar, Demirel  [2018 2nd International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT)](https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8543123) | * This study describes the use of image processing and deep learning to diagnose diabetic retinopathy from retinal fundus images. * In this experiment, the accuracy was 89%, the sensitivity was 86.67%, the specificity was 90.33%. * DRAWBACKS: * Using this method the diabetic retinopathy cannot be graded. |