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# **CNN-based Diabetic Retinopathy Detection**

DL Lab 20/21

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# Input Pipeline & Model architecture



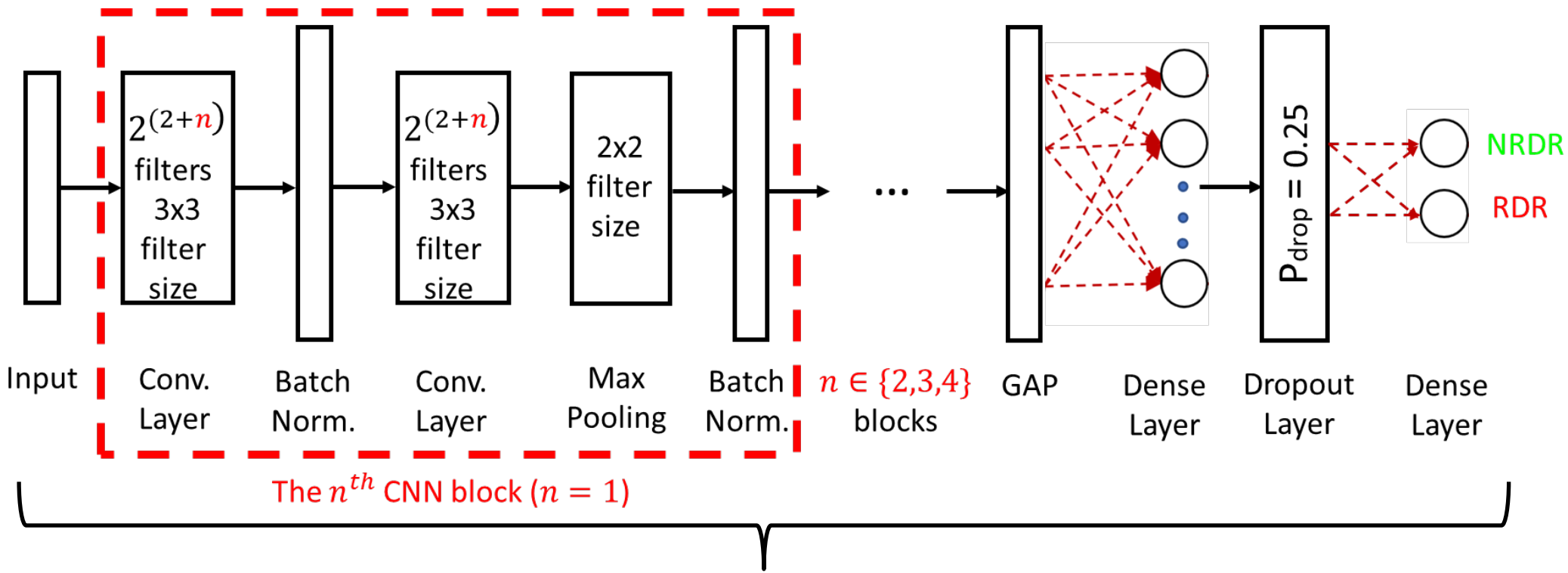
## Input Pipeline

Image format  
adjusting

Image  
processing

Normalization

Data  
augmentation



Total number of model parameters: 83.146

- Contrast Limited Adaptive Histogram Equalization (CLAHE)



Fig 1.1: Image before CLAHE

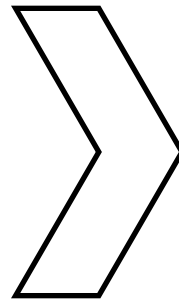


Fig 1.2: Image after CLAHE

- Ben Grahams Preprocessing from the DR Kaggle Competition

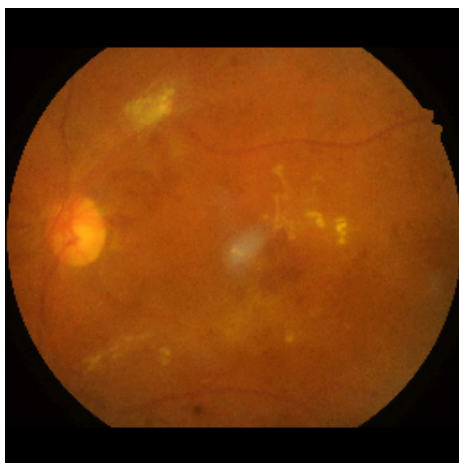


Fig 2.1: Image before Ben Graham

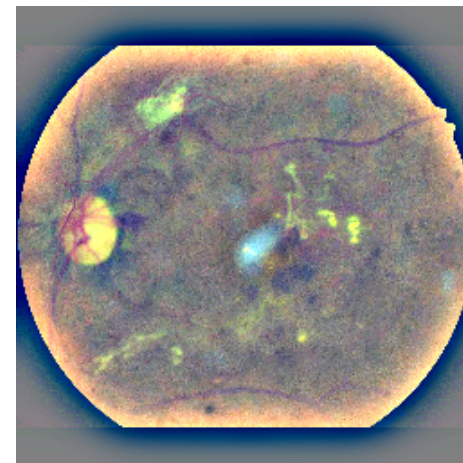
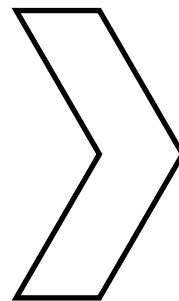


Fig 2.2: Image after Ben Graham

## Average of 10 runs

	Validation accuracy	Test accuracy
Ben Graham	89,82	82,30
CLAHE	90,11	82,45
No image processing	90,62	84,74

## Best overall

Validation accuracy	Test accuracy
93,27	88,06
91,66	87,78
93,27	89,62

**Thank you  
for your attention!**