AUTOMATED DIABETIC RETINOPATHY DETECTION

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ABSTRACT

Diabetic retinopathy(DR) is a disease that occurs in patients with long period history of diabetes where high levels of blood sugar damage blood vessels in a part of the eye called the retina. It starts out with only mild vision problems such as blurriness, however the ignorance of diabetic retinopathy will eventually lead to blindness. Thus, D-CNN Retina aims to classifying DR stages.

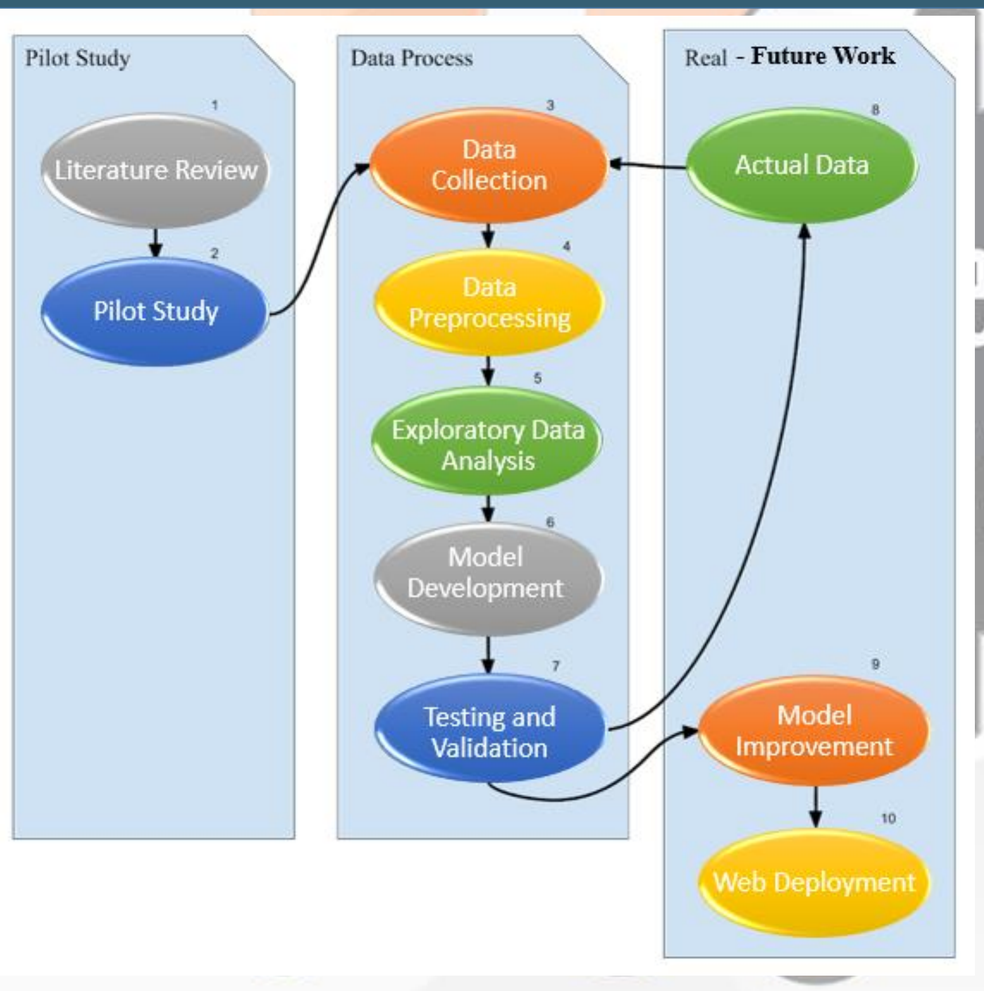
PROBLEM STATEMENT

Diagnosis of DR requires skilled reader and it's opens to the inconsistency of the diagnose.

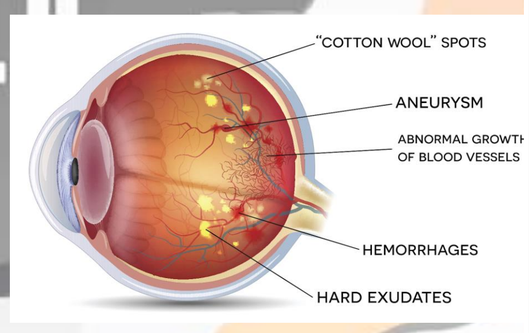
OBJECTIVE

- To construct DR into image model
- To develop an interface for DR detection
- To evaluate and test the constructed model
- To improve the model's performance

METHODOLOGY



FINDINGS & RESULT



	Normal	Mil	Mod	Sev	Prol
Nor	5212	0	0	0	0
Mil	481	0	0	0	0
Mod	1023	0	0	0	0
Sev	159	0	0	0	0
Prol	147	0	0	0	0

NOVELTY

EASY TO USE

SIMPLE & DETAIL PROCESS

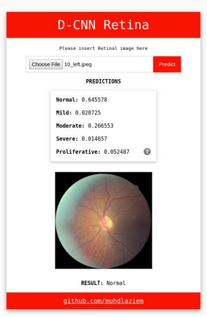
FAST

BENEFITS

Reduce the burden on ophthalmologists.

Mitigate diagnostic inconsistencies between manual readers by classifying DR stages.

COMMERCIALIZATION



Target Market
- Diagnose DR stages
- Awareness of DR

Channels
- Web Apps
- Mobile Apps

Target Market
- Doctors
- Public

CONCLUSION

Imbalance classes becomes drawbacks that made normal class are learned instead of their own class.

Improve sample selection, two separate models : 'Normal' and 'DR, and classification of the DR classes

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