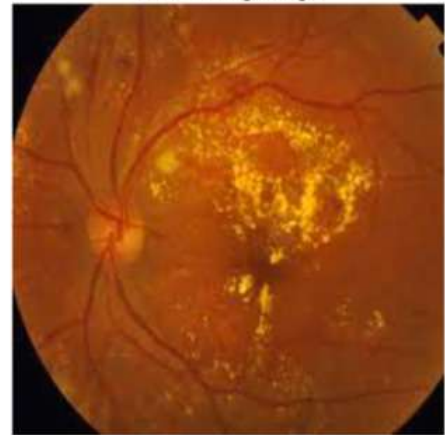


TECHNOLOGY DEVELOPMENT PROGRAM HEALTHTECH

Retitech

Detection of diabetic retinopathy with the help of AI technology of neural networks which helps to detect the irregularities in the retinal images

User Testing Image



```
1/1 [=====] - 0s 212ms/step
[[0.08790309 0.9086897 0.0034072 ]]
1/1 [=====] - 0s 94ms/step
The image indicates a positive result for diabetic retinopathy.
Diabetic Retinopathy Positive.
Diabetic Retinopathy Classification: Severe Diabetic
```

Issue Being Addressed

- ▶ Diabetic retinopathy which is caused by extra sugar in the body
- ▶ Conventional systems require a hard copy of the fundus image which uses paper and chemical dyes

Key Feature of the Technology/Product /App Which is Being Developed

- ▶ Proposed solution can diagnose the disease only through the soft copy of the image
- ▶ It's able to detect the affected retina within a very short time
- ▶ A person can check his/her retina easily from home without hospitalization
- ▶ Subscribe and unsubscribe features will be available for all
- ▶ Optimization of time and cost of detection

Impact & Benefits

- ▶ Technology will diagnose diabetic retinopathy in a time-efficient and cost-effective manner, easier than a conventional system
- ▶ Due to its cost-effectiveness and simple subscription system, it will satisfy the interest of people from all parts of society

Team

- ▶ Pratyush De, B.tech 4thYr
- ▶ Dipta Talukder, B.tech 4thYr
- ▶ PI: Dr N Malarvizhi, CSE Department
- ▶ Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology

CHANAKYA UG Fellowship

Targeted Customers & End Users

- ▶ Eye Hospitals
- ▶ Hospitals treating diabetic retinopathy
- ▶ Patients suffering from diabetes and issues in vision

Commercialization Status

- ▶ Improving the data to develop final prototype
- ▶ Collaborated with Global Eye Hospital, Kolkata and Shankar Nethralaya, Chennai