

Title: Embracing Technology to Illuminate the Darkness: A Call to Action for Eye Disease Detection

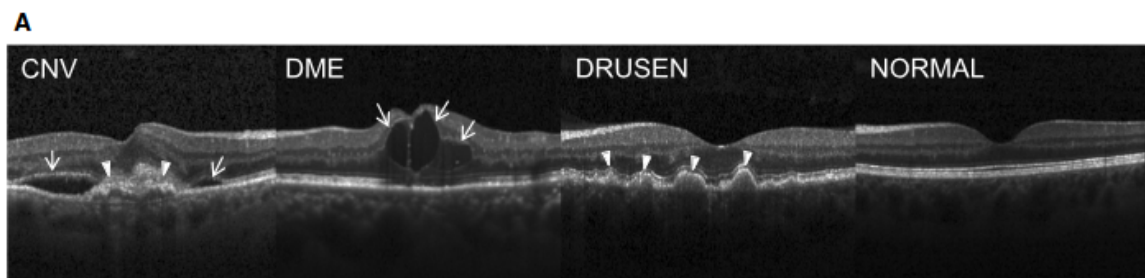
Dear Students,

Imagine, for a moment, a world where the beauty of a sunset, the colors of a rainbow, or the joyful eyes of a loved one start to fade away, not due to the passage of time but because of a lurking ocular disease. The reality is that millions across the globe face this daunting experience daily, with conditions like CNV, DME, and Drusen leading the charge. But here's where you, armed with the prowess of machine learning and a meticulously curated dataset, can make an indelible mark and shine a beacon of hope in this looming darkness.

Understanding the Adversaries:

- **CNV (Choroidal Neovascularization):** An eye condition where abnormal blood vessels grow underneath the retina. These vessels can leak blood and fluid, leading to a bulge or bump in the macula.
- **DME (Diabetic Macular Edema):** A consequence of diabetes, this condition is characterized by fluid accumulation in the macula due to leaking blood vessels. Without treatment, DME can lead to blindness.
- **Drusen:** Tiny yellow or white deposits under the retina. They're common as we age, but a large number in one place or their rapid increase can indicate a problem, such as age-related macular degeneration (AMD).

And then, of course, we have the eyes that are untouched by these conditions, categorized under 'Normal'.



The Dataset – Your Arsenal for Change:

Before you is a rich dataset, diligently segmented into four classes: CNV, DME, Normal, and Drusen. The training set boasts 5,000 images per class, allowing you to deep-dive into the intricacies of each condition. To refine and tune your models, a validation set of 1,000 images per class stands ready.

Your Mission:

Harness the power of machine learning to train a model that accurately identifies and classifies these conditions. Your tools are not just algorithms and datasets; they are your creativity, dedication, and the burning desire to make a tangible difference.

Metrics to Gauge Success:

Please report these metrics accuracy, micro F1, Confusion matrix, Average recall, precision for the disease classes. The main goal should be to maximise the average recall for the disease classes.

A Heartfelt Plea:

Dear Students, this isn't merely about coding a model or achieving high scores on a leaderboard. It's about the immense potential within you and the countless eyes that await an early diagnosis. Each algorithm you train and every improvement in recall can bring someone a step closer to retaining their sight.

As William Blake poetically put it, "The eyes are the windows to the soul." So, embrace this challenge, and let's ensure those windows remain vibrant and clear. In this noble endeavor, the light at the end of the tunnel could very well be the twinkle in someone's eye that you've helped preserve.

With unwavering belief in your capabilities and hope for brighter tomorrows,

Please don't rename any image names.