

Supplementary

S1. Effect of Eye movement and requirement of Registration

OCT-A Data showing the effect of mouse eye movement when optimal dispersion coefficients for index 225 are used on index 227-231.

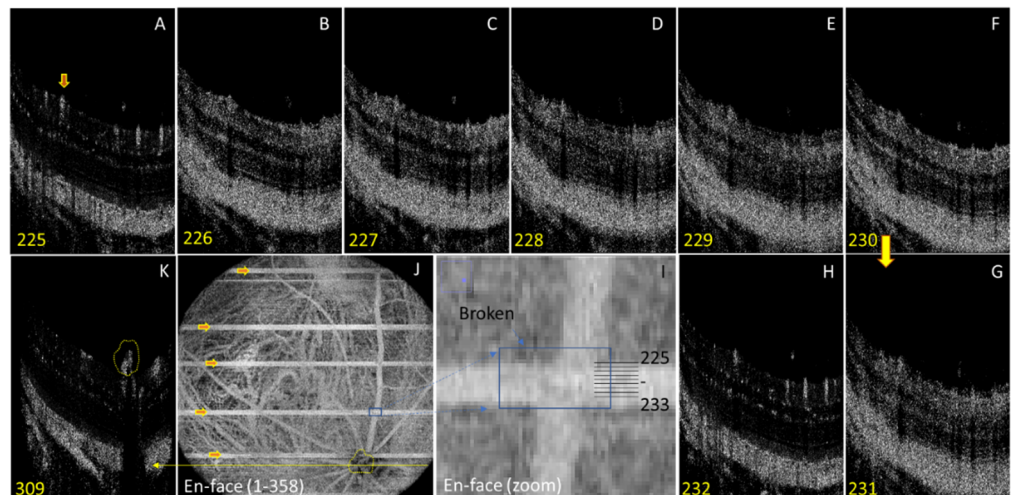


Figure S1: Effect of Mouse eye movement, figs. 1 (A) – (I) shows effect of mouse eye movement as retinal layer depiction sharpness gets effected starting from B and ending at H.

S2. AI Pipeline

Figure S2 illustrates the flow of the algorithm.

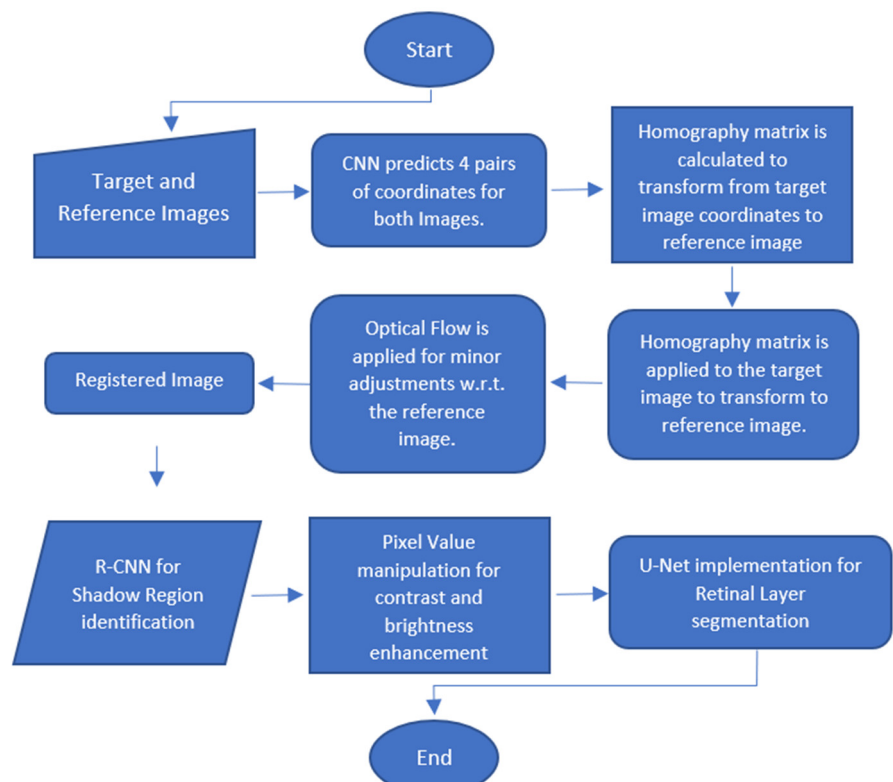


Figure S2: Flow Chart.

S3. Retinal Segmentation with and without AI Pipeline

Without accurate segmentation standard AI model (U-net) shows presence of broken retinal layer under the ILM blood vessels causing shadowed columns. AI Pipeline (that first suppress their presence by elevating the pixel value brightness) performs relatively better.

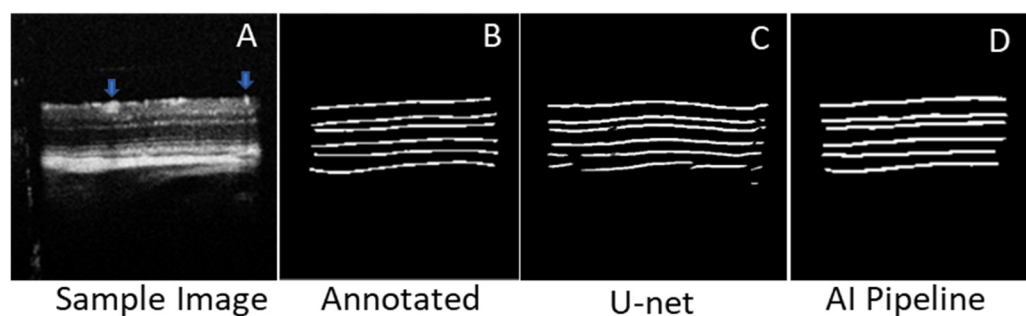


Figure S3: Retinal Segmentation with and without AI Pipeline. A) shows the sample image, B) manually annotated binary mask, C) Mask created by U-net model without removal of shadows and registration, D) Binary Mask created using AI-Pipeline.