Segmentation of Retinal Blood Vessels using Simple Morphological Operations

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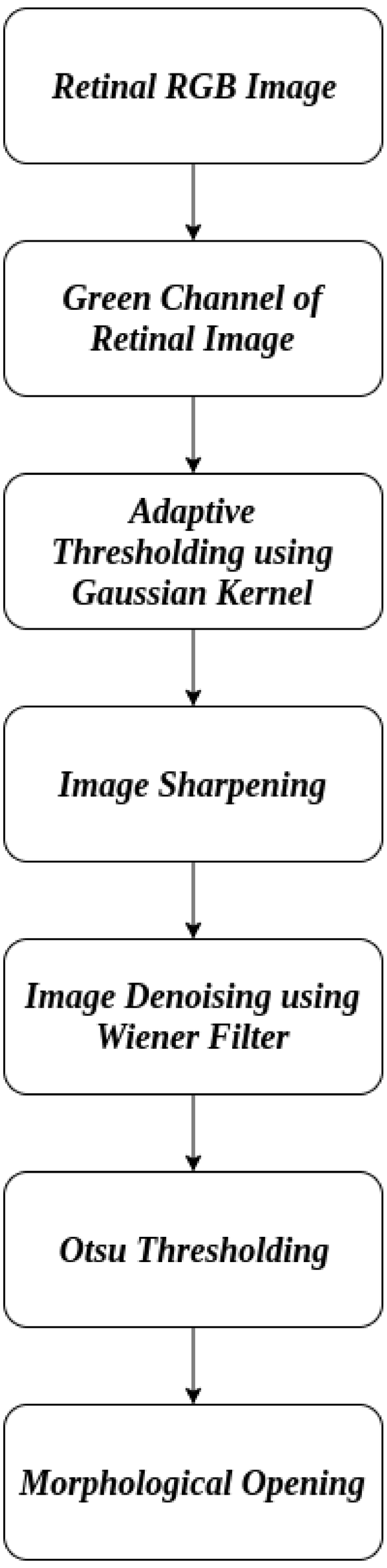
1. Introduction

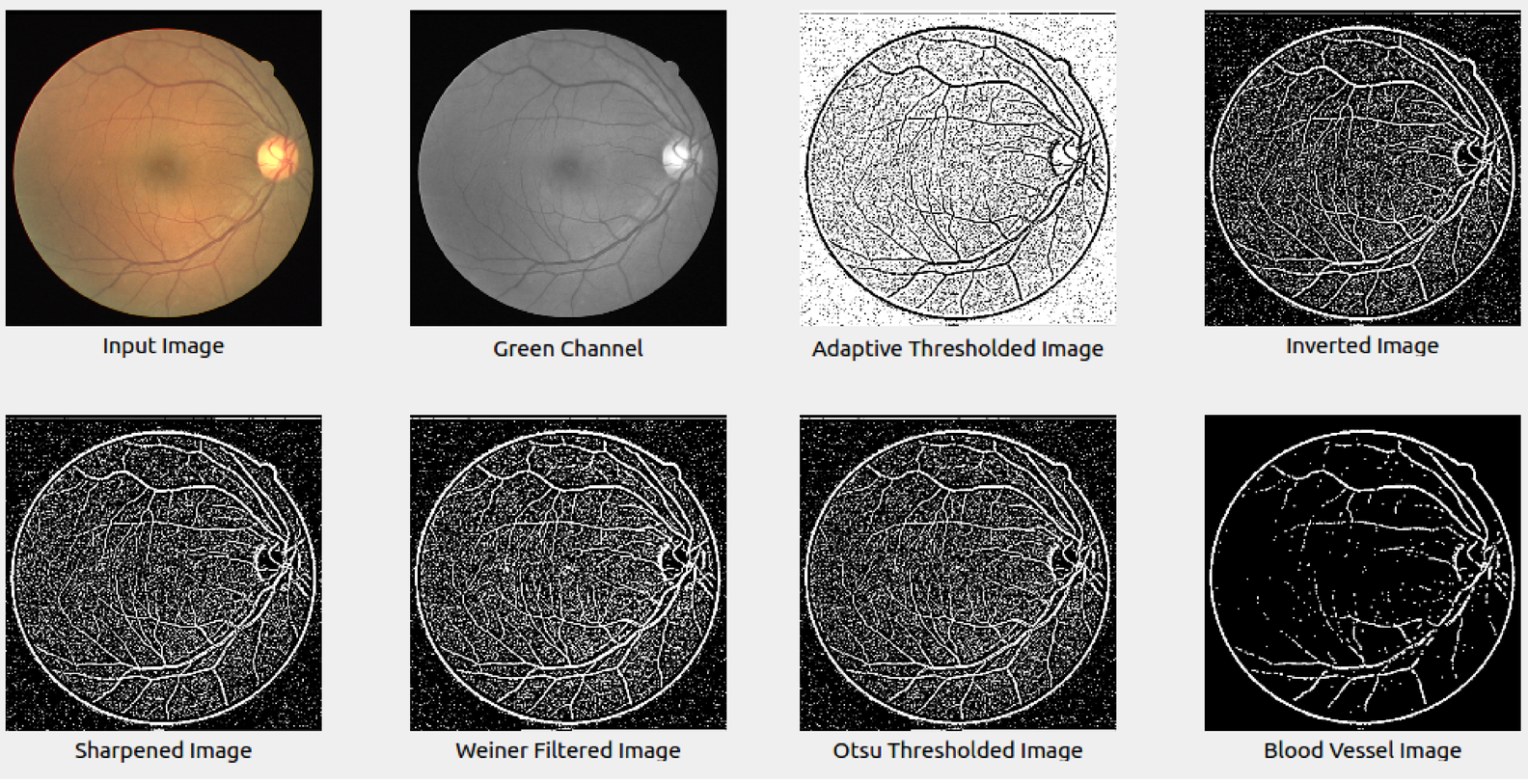
Retinal Blood Vessel Segmentation can be of greater importance because it carries information about many chronic disorders. It is challenging for any algorithm to analyze this complex structure by human eye. Moreover, it computational cost is high. In the proposed method [1], an efficient, computationally cost effective method has been implemented to segment the Retinal Blood Vessels for further Analysis.

2. Methodology

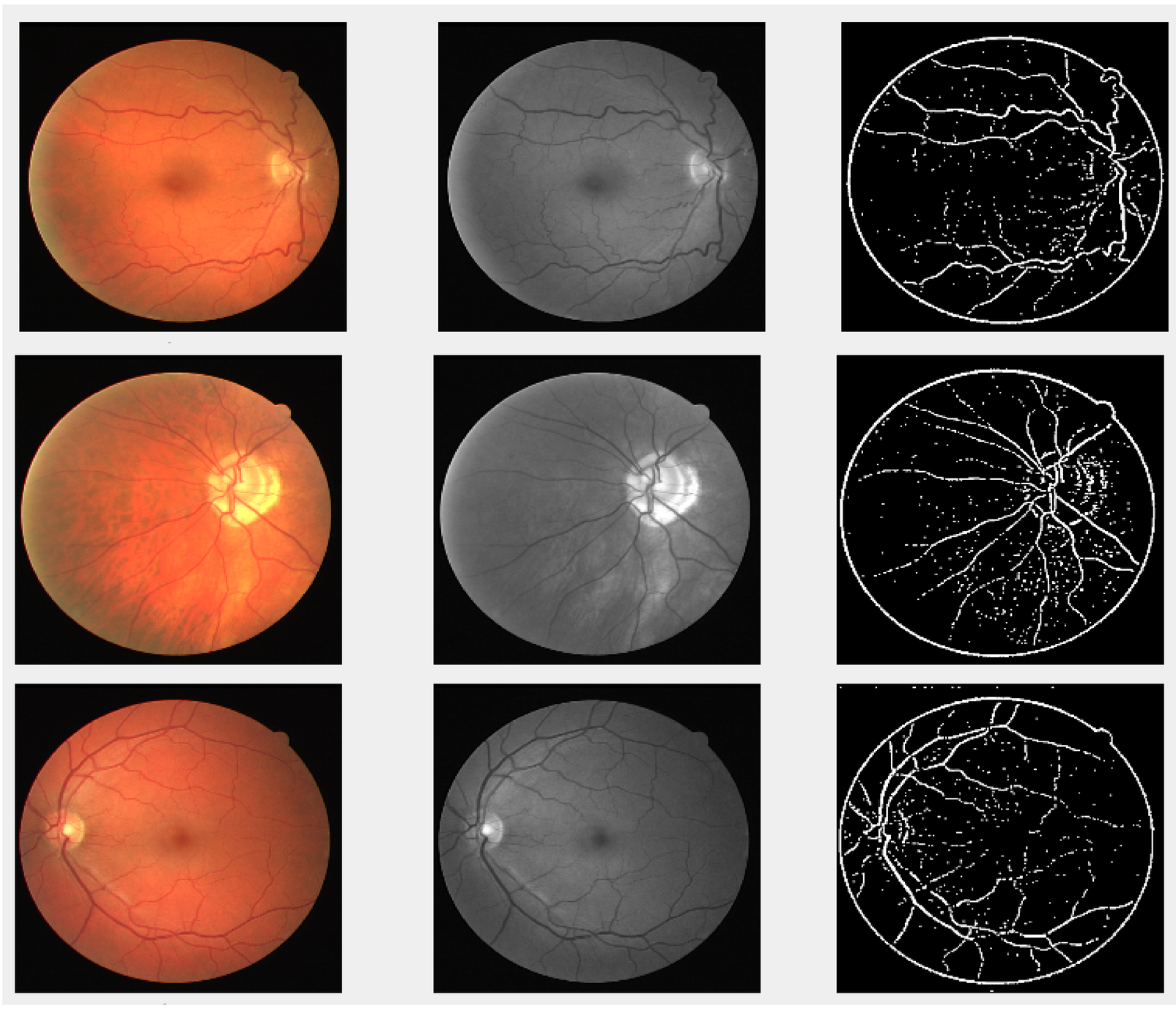


3. Implementation

The following figure shows the step-by-step process by the proposed Algorithm to segment the Retinal Blood Vessels.



4. Results



5. Conclusions

A fast and effective unsupervised retinal blood vessel segmentation method has been implemented in this project. The proposed method is based on simple thresholding and morphological operations. The Algorithm is tested using images from the DRIVE data set.

6. References

[1] Umut Özkaya, Şaban Öztürk, Bayram Akdemir, and Levent Seyfi. An efficient retinal blood vessel segmentation using morphological operations. pages 1–7, 10 2018.