Dataset Description

Rabbani Dataset

Rabbani dataset [1] is one of the unique retinal image databases that contains a total of 4,241 OCT scans from 50 normal, 48 dry AMD, and 50 DME affected subjects. The dataset is acquired at Noor Eye Hospital, Tehran, Iran.

BIOMISA Dataset

BIOMISA dataset [2] is another public dataset to analyze retinal diseases. The dataset was introduced by Biomedical Image and Signal Analysis (BIOMISA) Lab at the National University of Sciences and Technology (NUST), Islamabad Pakistan. BIOMISA dataset contains a total of 5,324 OCT (657 dry AMD, 2,195 ME, 904 normal, 407 wet AMD and 1,161 CSR) from 99 subjects (8 dry AMD, 19 wet AMD, 31 ME, 24 CSR and 17 healthy). The scans within the BIOMISA dataset are acquired through Topcon 3D OCT 2000 in the Armed Forces Institute of Ophthalmology, Rawalpindi Pakistan.

Zhang Dataset

Zhang dataset [3] is one of the largest retinal OCT datasets containing 109,309 scans representing wet AMD (choroidal neovascularization), dry AMD (Drusen), DME and healthy pathologies. The dataset has been arranged in a way that 108,309 scans are used for training and 1,000 scans are used for testing purposes. Moreover, the scans in the Zhang dataset are acquired through Spectralis, Heidelberg Inc. Zhang dataset [3] also contains CXRs to screen pneumonia subjects.

Duke-I Dataset

Duke-I dataset [4] is one of the largest datasets from Vision and Image Processing (VIP) lab, Duke University, USA. It contains 38,400 retinal OCT scans from healthy and AMD subjects. The scans are acquired through Bioptigen OCT machine. The dataset also contains annotations for aiding the automated tools in extracting retinal layers.

Duke-II Dataset

Duke-II dataset [5] contains 610 OCT scans from severe DME subjects. The dataset was first introduced in [5] by VIP lab and it contains detailed markings for the retinal layers and fluids from two expert clinicians. The scans within Duke-II are acquired through Spectralis, Heidelberg Inc.

Duke-III Dataset

Duke-III [6] is the third dataset from the VIP lab that we used in this research. The dataset contains retinal OCT scans from 15 AMD subjects, 15 DME subjects, and 15 healthy subjects. The dataset is primarily designed for the classification of these pathologies and the scans within the datasets are organized with respect to the pathologies which they reflect. The scans within the Duke-III dataset are also acquired through Spectralis, Heidelberg Inc.

References:

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