AN EYE SCREENING METHOD USING A MODEL BUILD USING AN AI ENGINE TRAINED WITH SPECIALIST-GRADED RETINAL FUNDUS IMAGES

ABSTRACT

An embodiment of the invention is a method of eye screening comprising the steps of: (a) loading a plurality of specialist-graded retinal fundus images into a database; (b) training an AI Engine to operate on the specialist-graded retinal fundus images; (c) building a model from the specialist-graded retinal fundus images using the AI Engine to differentiate between only one of a normal classification and a not-normal classification; (d) receiving from a web-server a plurality of patient files, (e) loading the patient files into the database; (f) differentiating with use of the model the retinal fundus images of each patient file between only one of the normal classification and the not-normal classification; and (g) updating each patient file to classify the retinal fundus images as only one of the normal classification and the not-normal classification. The AI Engine comprises at least one algorithm or a combination of algorithms selected from machine learning algorithms and deep learning algorithms. The AI Engine comprise at least one of a support vector machine (SVM), a gradient boosting machine (GBM), a Random Forest and a convolutional neural network (CNN). Each patient file includes a plurality of patient data and retinal fundus images that are un-graded.

[No Figure]