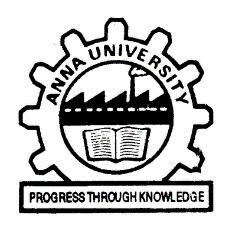
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**CLOUD BASED DETECTION OF GLAUCOMA USING MACHINE LEARNING**

**A PROJECT REPORT**

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***in partial fulfillment for the award of the degree***

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**BONAFIDE CERTIFICATE**

Certified that this project report titled **“CLOUD BASED DETECTION OF GLAUCOMA USING MACHINE LEARNING”** is the bonafide work of **“ASHWATH S (311014104015), BALASUBRAMANIAM T(311014104016), KARTHIK RAJ A (311014104033)”** who carried out the project work under my supervision.

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**ABSTRACT**

Eye is one of the best gifts mankind has ever had. Technically, it can be termed as one of the sensors of our body. Glaucoma is an eye disease which is the second most cause for blindness worldwide. Being an initially unnoticeable disorder, glaucoma will cause an irreversible vision loss by the time it is realized by the patient through vision difficulties. Glaucoma has no symptoms during it’s early stages which makes it more dangerous. This disease affects the drainage of aqueous fluids produced inside the eye and floods the channel by narrowing down or blocking the channel through which it flows. Optical coherence tomography and machine learning are the concepts based on which this project is taken to the next level. The proposed system aims at simplifying the process of glaucoma detection at early stages using machine learning via classifier deployed in cloud. A mobile app, exclusively developed for the maintenance of these purposes will periodically intimate the user with necessary measures to have it under control. Seeming technically feasible, this project will be of great use to the patients of this disease worldwide as it makes things happen artificially and automatically accurately.

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**LIST OF ABBREVIATIONS**

CDR Cup-to-Disc Determination

JSON JavaScript Object Notation

ROI Region Of Interest

PCA Principle Component Analysis

OCT Optical Coherence Tomography

ONH Optic Nerve Head

CNN Convolution Neural Network

SVM Support Vector Machine

OC Optic Cup

OD Optic Disc

CFI Colour Fundus Images