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(71)Name of Applicant :

1)Dr.S.Sudhakar

Address of Applicant :Professor Department of Computer Science & Engineering, Sree Sakthi Engineering College, Karamadai, Coimbtaore 641 104,Tamil Nadu, India Tamil Nadu India

2)Dr.S.Raju

3)Dr. Pankaj Dadheech

4)Dr.V. Priya

5)Mr.V.Vinoth Kumar

6)Dr. T. Avudaiappan

7)Dr A Syed Musthafa

8)Dr C.Nallusamy

9)Dr.K.Prasanth

10)Dr.E.Punarselvam

(72)Name of Inventor :

1)Dr.S.Sudhakar

2)Dr.S.Raju

3)Dr. Pankaj Dadheech

4)Dr.V. Priya

5)Mr.V.Vinoth Kumar

6)Dr. T. Avudaiappan

7)Dr A Syed Musthafa

8)Dr C.Nallusamy

9)Dr.K.Prasanth

10)Dr.E.Punarselvam

(57) Abstract :

The monitoring system of the patient's health status is a demanding job in the home. In particular, old age patients ought to checked regularly, and their dear most ones need to be stated during a work period about their health status periodically. An individual's blood group is composed of Red Blood Cell antigens, whose composition is determined by gene sequence, protein presence, and antigen structure. The proposed invention is a non-invasive approach to classify the blood cells group without perforating the tissue. Light serves as a channel for optical signals that can pass through the palm and measures the changing voltage. In this system, a smart patient health monitoring program is put forward, using sensors and microcontrollers to monitor patient health and send alert notifications to the mobile phone for the patient. Cholesterol levels, as well as blood glucose levels, are used in the application system, helps to keep continuous monitoring of patient health. The IoT-based patient health tracking system efficiently utilizes the Internet for monitoring to save patient's lives and their health to prevent emergencies. The approach provides a method for automatically determining the type of human blood by applying image processing algorithms to the optically obtained images of the skin surface underlying superficial capillaries. The technique embeds the Multi-Wavelength Light scattering system as light passes through capillaries to dynamically distinguish blood cells on the Red Blood Cell surface, based on specific antigens. The primary detector structure is created by the portable optical system (camera) along with the photo-detectors. Used to detect the distribution/pattern of scattered light produced by the blood cells to determine the type of blood without taking blood samples from the body. The proposed model intended to create an embedded system to execute blood tests based on Rh and ABO blood typing systems using Image Processing methods.

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APPLICANT NAME	1 . Dr.S.Sudhakar 2 . Dr.S.Raju 3 . Dr. Pankaj Dadheech 4 . Dr.V. Priya 5 . Mr.V.Vinoth Kumar 6 . Dr. T. Avudaiappan 7 . Dr A Syed Musthafa 8 . Dr C.Nallusamy 9 . Dr.K.Prasanth 10 . Dr.E.Punarselvam
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E-MAIL (As Per Record)	sudhasengan@gmail.com
ADDITIONAL-EMAIL (As Per Record)	sudhasengan@gmail.com
E-MAIL (UPDATED Online)	sudhasengan@gmail.com
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