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Anemia Possibility Prediction in Women at The Reproduction Age Using Artificial Neural Networks

A Dissertation By

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Abstract

Hemoglobin is an iron-rich protein carried by red blood cells that binds to oxygen in the lungs and transports it to different parts of the body. When a person lacks red blood cells or when a person's red blood cells are not functioning properly, that particular individual starts to develop the condition which is commonly known as anemia. Anemia comes in a variety of types, each with its unique etiology. Anemia can be short-term or long-term, and it can develop from mild to severe. Anemia is caused by a variety of factors in most cases and because of this it has now become the most common blood disorder which can be found quite easily among humans.

The three major groups which are at a greater risk because of this condition can be specifically pointed out as the infants, woman at the age of reproduction and the older generation. Infants can be born with this condition since anemia can be handed down from generation to generation as a genetical complication. Not only blood losses occurred during pregnancy and menstruation cycles also increased blood supply needed during pregnancy will eventually lead the women at age of reproduction into the anemic state and finally since the older generation is much keener to have severe chronical diseases and lifestyle practices practiced over a long course of time, they are also at a risk of developing this medical condition.

This research has taken the necessary actions to address a particular target group which is the women at the age of reproduction and minimize the number of patients diagnosed with this condition as much as possible in the specified target group by introducing a system which can predict the possibility of being anemic at an early stage by optimizing non-invasive data which can be easily acquired from any person and at the end the study would produce an accurate result which the user can depend upon.

Keywords: Anemia, non-invasive data, women at the age of reproduction, Artificial Neural Networks

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