A Project Abstract

on

EARLY FORECASTING OF LOW BIRTH WEIGHT USING ENSEMBLE LEARNING

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by

SAMYUKTHA K	**204G1A0592**
RANGA DHAMINI N	**204G1A0579**
VANDANA BAI S	**204G1A05B9**
VISHNU B	**204G1A05C3**

Under the Guidance of

Mrs. M. SOUMYA, M. Tech, (Ph.D).

Department of Computer Science & Engineering

SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY

(AUTONOMOUS)

(Affiliated to JNTUA, accredited by NAAC with 'A' Grade, Approved by AICTE & Accredited by NBA (EEE, ECE & CSE))

Rotarypuram Village, BK Samudram Mandal, Ananthapuramu - 515701.

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ABSTRACT

Early prediction of Low birth weight is a critical in maternal and neonatal healthcare to identify and address potential risks and complications associated with infants born with a low birth weight, typically defined as less than 2,500 grams (5.5 pounds). These newborns were more likely to die within the first month of birth or have long-term implication Low Birth weight affects one out of every seven newborns, accounting for about 14.6 percent of the babies born worldwide. So, predictions of low birth weight is necessary and a better preventive measure and indicator of infant health risks. By leveraging the power of ensemble methods, we aim to enhance the accuracy and reliability of LBW prediction, ultimately improving neonatal outcomes. The primary objective is to develop a robust predictive model that identifies pregnancies at risk of LBW at an early stage. The overarching goal is to provide healthcare providers with a tool that can support timely interventions, optimize prenatal care, and reduce the incidence of LBW-related complications. Ensemble learning techniques, including decision trees as a week learner and employed to create a predictive model. Through a rigorous evaluation process, the ensemble model demonstrates superior predictive performance when compared to individual algorithms. By addressing LBW at an early stage, this system contributes to improved neonatal health outcomes and underscores the importance of data-driven approaches in maternal and child healthcare.

Keywords

Low Birth Weight, Ensemble Learning, infants health, decision tree.

Date:

Guide Sign:

Name: