MALLA REDDY COLLEGE
OF ENGINEERING & TECHNOLOGY
(AUTONOMOUS INSTITUTION - UGC, GOVT. OF INDIA)
Affiliated to JNTUH; Approved by AICTE, NBA-Tier 1 & NAAC with A-GRADE | ISO 9001:2015

DEPARTMENT OF COMPUTATIONAL INTELLIGENCE

III YEAR CSE - AIML II SEM

COURSE: APPLICATION DEVELOPMENT - 2 **COURSE CODE: R22A66933**

SAFEMOM: PREDICTING PREGNANCY RISKS WITH MACHINE LEARNING

ABSTRACT

SafeMom aims to develop an intelligent predictive model to assess pregnancy risks by analyzing various parameters, including age, blood pressure, and blood sugar levels. This initiative seeks to support healthcare providers in delivering timely and effective interventions. Current systems predominantly rely on manual assessment and generalized guidelines, leading to variability in risk prediction accuracy. These methods often fail to consider individual-specific parameters and trends. The primary drawback of existing systems is their limited precision in identifying complex risk patterns. The proposed work involves creating a machine learning-based predictive model to classify pregnancy risk levels with high accuracy while offering actionable insights for healthcare practitioners. This system will integrate advanced algorithms to enhance decision-making in maternal healthcare. Technologies such as Random Forest, Gradient Boosting, and Support Vector Machines (SVM) will be utilized. The project will also implement rigorous hyperparameter tuning, feature engineering, and evaluation metrics like precision and recall.

Keywords: Pregnancy risk prediction, Machine Learning, Healthcare, Predictive analytics

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