A Mini Project Report

On

# **WEB-BASED APPLICATION OF OSTEOPOROSIS RISK PREDICTION**

Submitted in partial fulfilment of the

Requirements for the award of the degree

**BACHELOR OF TECHNOLOGY**

**IN**

**INFORMATION TECHNOLOGY**

Submitted By

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## ANURAG UNIVERSITY

**( Approved by AICTE and NBA Accredited)**

**Venkatapur (V), Ghatkesar (M), Medchal district, Hyderabad, Telangana,500088**

**2021-2025**

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**CERTIFICATE**

This is to certify that the mini project report entitled **“WEB-BASED APPLICATION OF OSTEOPOROSIS RISK PREDICTION”** is a project work done and submitted by

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## DECLARATION

This is to Certify that the project work **“WEB-BASED APPLICATION OF OSTEOPOROSIS RISK PREDICTION”** submitted to Anurag University in partial fulfilment of the requirement for the award of the Degree of Bachelor of Technology (B-Tech), is an original work carried out by **KATIKA SUSHMITHA(21EG112A21), NADUKUDA SANJANA(21EG112A29), NALLA MADHURI(21EG112A30)** under the guidance of **Mr. B. RAVI RAJU**, Associate Professor in the Department of Information Technology. This matter embodied in this project is a genuine work, done by the students and has not been submitted whether the university or to any other university/Institute for the fulfillment of the requirement of any course of study.

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**ABSTRACT**

Osteoporosis is a common condition characterized by weakened bones, which increases the likelihood of fractures and other complications. Early detection and management of osteoporosis are critical in preventing long-term health issues. This system aims to predict an individual's risk of developing osteoporosis using a machine learning-based approach that considers key health factors such as age, gender, calcium intake, and bone density.

The system is built around a predictive model designed to assess osteoporosis risk by analyzing user-inputted data. Upon entering the required information—age, gender, daily calcium intake, and bone density—the system processes this data through a pre-trained machine learning algorithm that has been trained on a dataset of similar health metrics. The output is a binary prediction, indicating either a high or low risk of osteoporosis.

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**LIST OF ABBREVIATIONS:**

1. BMD - Bone Mineral Density
2. ML - Machine Learning
3. BMI - Body Mass Index
4. DB – Database
5. UI - User Interface
6. ER - Entity-Relationship

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