MALLAREDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMUS 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 B. TECH II SEM

COURSE: APPLICATION DEVELOPMENT PROJECT - II

COURSE CODE: R22A66933

SECTION: CSE (AIML) - A

PROJECT ABSTRACT

Title: FitFusion: Smart Workout, Diet & Motivation App

Abstract:

FitFusion is an AI-powered fitness application designed to deliver personalized workout plans, tailored diet recommendations, and daily motivational content based on user data such as weight, height, age, and fitness goals. Unlike existing platforms that often focus on isolated aspects of fitness, FitFusion integrates these key elements cohesively, offering a holistic approach to health and wellness. By leveraging AI-driven algorithms, the app dynamically adjusts workout and diet plans in real-time based on user progress and preferences. The Smart Progress Dashboard, powered by predictive analytics, provides performance insights, while daily motivational content ensures sustained user engagement and mental wellness support.

The project utilizes advanced technologies, including Machine Learning (Linear Regression, LSTM) for fitness predictions, Collaborative Filtering for personalized recommendations, Genetic Algorithms for diet optimization, and NLP for generating motivational content. The backend is built with Python (Django/Flask), and the frontend uses React.js to deliver an interactive and user-friendly experience. FitFusion aims to bridge the gap between fragmented fitness tools and create a smarter, more adaptable fitness journey for users.

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Signature of the Guide **Project Coordinator** **HOD**