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Fitness Calorie Burn Estimator

# Introduction

This project aims to estimate the number of calories burned during exercise based on user-specific inputs such as gender, age, weight, exercise type, intensity, and duration. The solution uses a public dataset and provides a user-friendly web application for personalized health feedback.

# Dataset

We used a publicly available calorie burn dataset that contains features such as Gender, Age, Weight, Duration, Exercise Type, Intensity, and Calories Burned. The dataset allows for building a regression model to predict calories burned for different users and activities.

# Methodology

The data was cleaned and processed to remove missing values and convert categorical features to numerical format. Relevant features were selected. A linear regression model was trained using scikit-learn. The trained model was then deployed in a Streamlit application to provide real-time calorie burn predictions.

# Results

The web app allows users to enter their details and workout info. It provides an estimated number of calories burned along with health suggestions based on the result. The system gives accurate, instant feedback for personal fitness tracking.

# Conclusion

This end-to-end project demonstrates the full pipeline from data preprocessing to user interface deployment, enabling real-world use of machine learning in health and fitness.

Output:  
