FUSION PIONEERS

Apart from joining Moringa, how else can one loose weight?

Fussion Pioneers

EXERCISE INTENSITY RECOMMENDATION SYSTEM

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INTRODUCTION

Exercise intensity refers to how hard your body is working during physical activity. Your health and fitness goals, as well as your current level of fitness, will determine your ideal exercise intensity. In today's thriving fitness and wellness industry, the development of a recommendation system for exercise intensity presents valuable business opportunities. Fitness centers, gyms, personal trainers, healthcare providers, wellness Apps & platforms can leverage this system to offer tailored workout programs that align with individual goals, preferences, and fitness levels, ultimately attracting and retaining members.

PROBLEM STATEMENT

Develop a recommendation system for exercise intensity that provides personalized recommendations on appropriate workout intensities based on individual characteristics, including age, gender, BMI, exercise duration, heart rate, calories burned, weather conditions, and desired weight goals. The goal is to guide individuals in selecting exercise intensities that optimize their fitness outcomes, taking into account their specific attributes and preferences.

OBJECTIVES

Build a recommendation system based on individual characteristics such as age, gender, body mass index (BMI), exercise duration, heart rate, calories burned, weather conditions, and desired weight goals.

2

Develop a model that can predict the optimal exercise intensity for a given individual.

3

Identify the factors that contribute to optimal exercise intensity.

4

To develop a recommender system that can dynamically adjust exercise intensity recommendations based on changing weather conditions. The system should consider the impact of different weather conditions on workout performance and suggest appropriate exercise intensities accordingly

DATA UNDERSTANDING

We used the exercise dataset which we scraped from Kagle and NewYork

Our dataset contained 100068 rows and 11 columns

DATA PREPARATION

Imported libraries and loading dataset

Checked for duplicates,missing values and removing outliers

Applied feature Engineering in important features like BMI, Calories Burn, Duration, and age

Split data for training model, validation and test model

AGE GROUP ANALYSIS

Younger individuals exercise more due to higher energy levels, better physical capabilities, and prioritizing health and appearance. As we age, there are gradual changes that occur in our bodies, particularly in relation to our bones and muscles. As a result, the body becomes less robust and may experience difficulties in performing physical tasks that were once easier.

ACTUAL WEIGHT AND DREAM WEIGHT ANALYSIS

The plot reveals that, on average, individuals tend to have higher actual weight than their desired or dream weight across age groups.

ACTUAL WEIGHT ,AGE & GENDER ANALYSIS

We can observe a general trend whereas age increases, there is a tendency for actual weight to increase as well. This is evident by the overall upward trend of the data points. There is no clear association between exercise type and actual weight based on the scatter plot.

COMPARISON OF MEAN DREAM WEIGHT AND ACTUAL WEIGHT ACROSS AGE GROUPS ANALYSIS

Across all age groups, the graph illustrates that the mean actual weight exceeds the mean dream weight.

MODELING

Model	RMSE
Logistic Regression	3.83
XGBoost Regressor	2.92
Random Forest Regressor	2.90
Tuned Random Forest	2.88

Our best-performing model was Random Forest with a Root Mean Square Error of 2.88.

DEPLOYMENT

Exercise Intensity Recommender

Exercise Intensity Recommender

Select Calories Range to Burn

100 and Below

Duration in minutes

0

Dream Weight

0

Height in meters

0.00

Actual Weight

0

Weather Conditions

Sunny

Age

0

Gender

Male

Predicted Exercise Intensity

2

Activate Win
Go to Settings to

CONCLUSION

In conclusion, the development of an exercise intensity recommendation system presents significant opportunities for various stakeholders in the fitness, wellness, and healthcare sectors. By leveraging individual characteristics, including age, gender, BMI, exercise duration, heart rate, calories burned, weather conditions, and desired weight goals, the recommendation system can guide individuals in selecting appropriate workout intensities that align with their specific attributes and preferences.

RECOMMENDATIONS

Personalized Exercise Intensity Recommendations

The model can be utilized to provide personalized exercise intensity recommendations to individuals based on their characteristics, including age, gender, BMI, exercise duration, heart rate, calories burned, weather conditions, and desired weight goals.

Fitness Centers and Gyms

Trainers can utilize the system to design individualized workout programs that align with the specific needs and goals of their clients. By offering personalized recommendations, fitness centers, and gyms can provide a higher level of service and help clients achieve better fitness outcomes.

Healthcare Providers

The system can assist healthcare professionals in prescribing appropriate exercise intensities for individuals with specific health conditions or goals. By tailoring exercise recommendations to each individual's needs, the system can contribute to better patient outcomes and improved overall health.

THAT LOOK PEOPLE GIVE YOU
WHEN THEY SEE YOU FOR THE FIRST TIME
AFTER YOUR TRANSFORMATION

THANK YOU

FEEDBACK/ REMARKS