



# FUSION PIONEERS

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



# EXERCISE INTENSITY RECOMMENDATION SYSTEM



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# INTRODUCTION

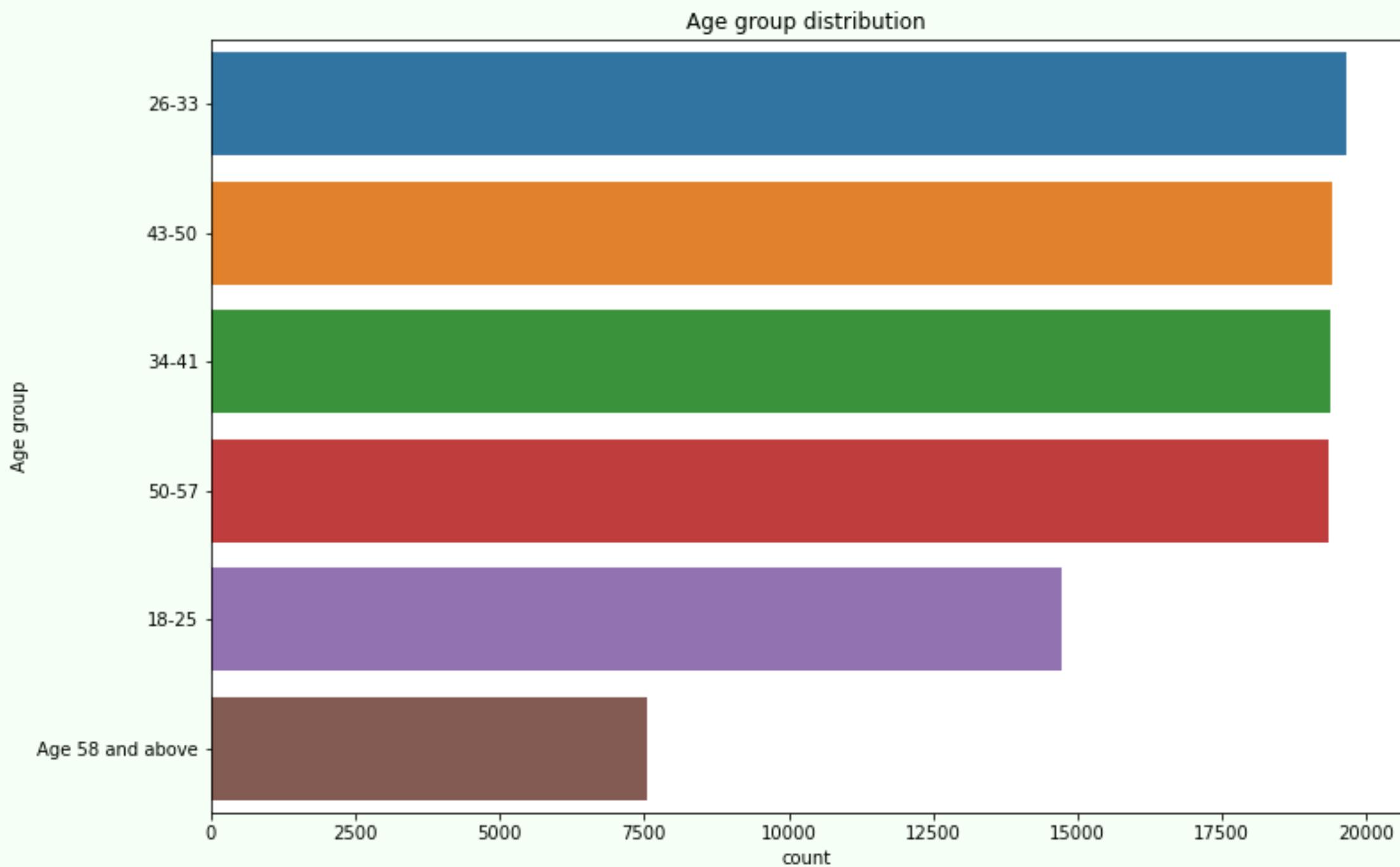


In today's thriving fitness and wellness industry, the development of a recommendation system for exercise intensity presents valuable business opportunities. Fitness centers, gyms, personal trainers, healthcare providers, wellness Apps & platforms can leverage this system to offer tailored workout programs that align with individual goals, preferences and fitness levels, ultimately attracting and retaining members.

# OBJECTIVES

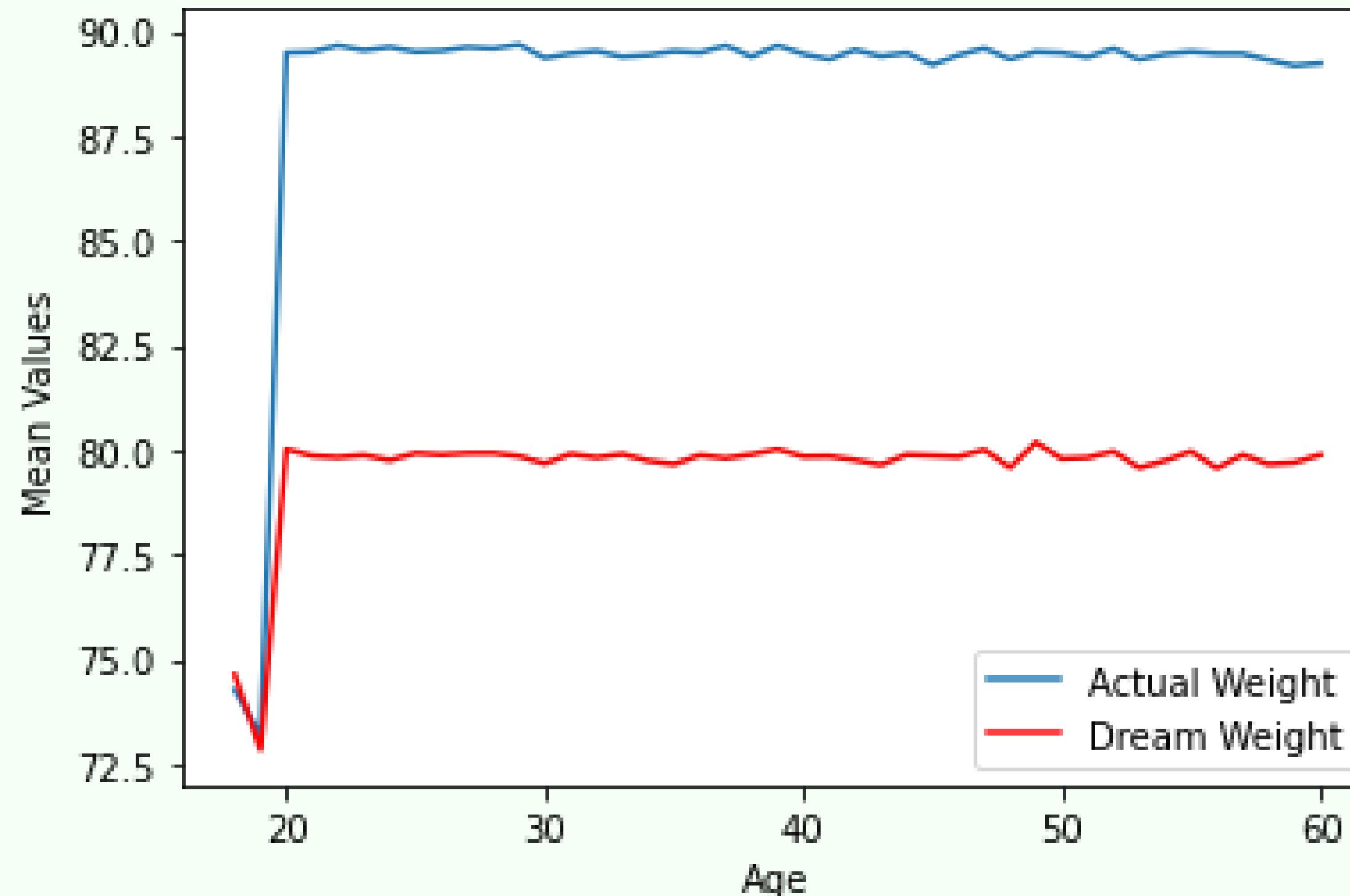
Develop a recommendation system that can dynamically adjust exercise intensity recommendations based on individual characteristics such as age, gender, body mass index (BMI), exercise duration, heart rate, calories burned, weather conditions and desired weight goals.

# AGE GROUP ANALYSIS



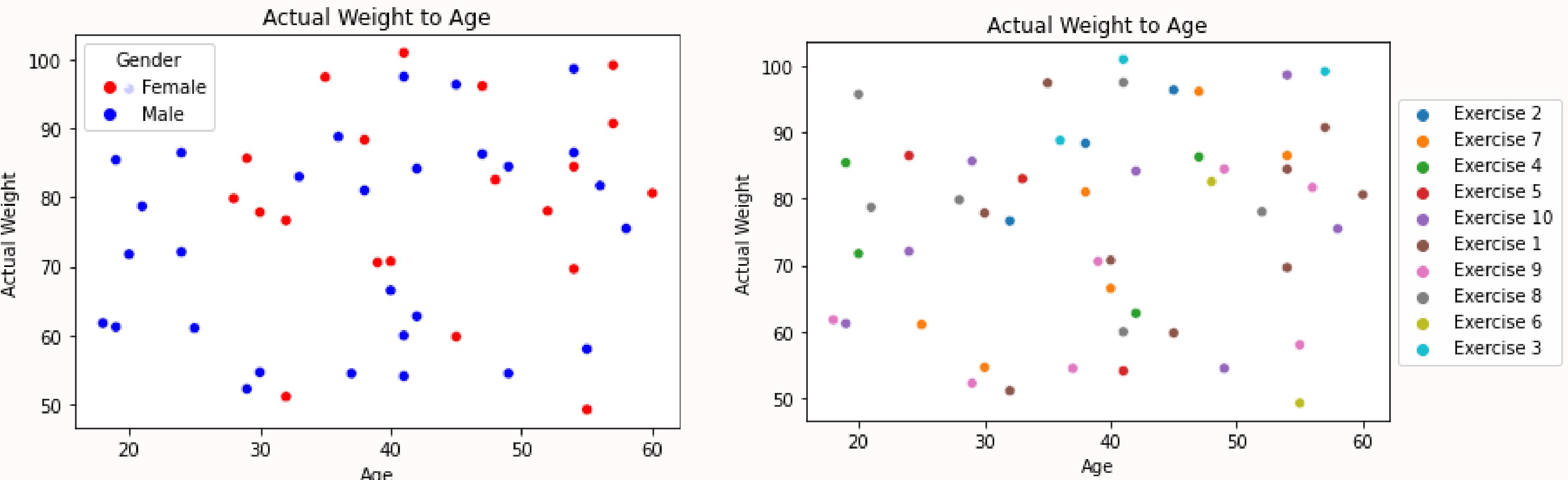
*Younger individuals exercise more due to higher energy levels, better physical capabilities, and prioritizing health and appearance. As we age, there are gradual changes that occur in our bodies, particularly in relation to our bones and muscles. As a result, the body becomes less robust and may experience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

# ACTUAL WEIGHT AND DREAM WEIGHT ANALYSIS



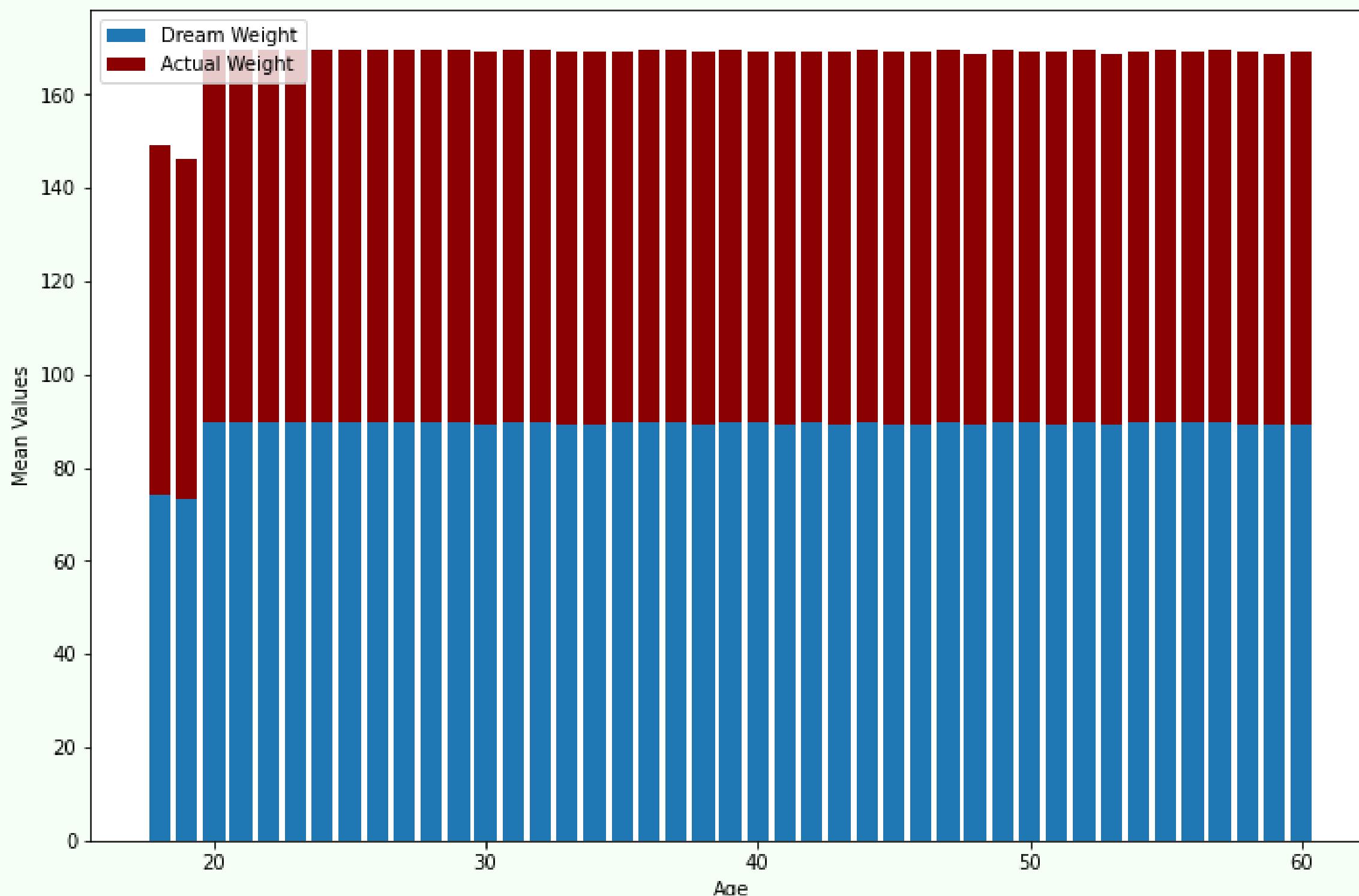
*The plot reveals that, on average, individuals tend to have higher actual weight than their desired or dream weight across age groups.*

# 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.*

# MODELLING

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.*



# 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

