

The impact of daily diet and exercise on weight

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Source code available here.



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Outline

- Introduction
- Tools for develop model
- Results
- Conclusion

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Introduction

- People emphasize their health and strengthen it by exercising at the gym, in the park, or even at home.
- We aim to establish a website to help them check whether their **actual weight** is normal.
- Given their **age, gender, height, weight, eating habits** and **activity level**.
- Displays a weight result with a histogram.

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Tools for develop model

- Programming Language: Python, HTML, CSS
- Data transmitting: Flask
- Aesthetic: JavaScript

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Results

Our anticipate

- Accurately calculate the actual weight using a series of indexes.

Our model anticipate

- Provide BMI suggestion, different data for actual weight and a histogram for viewing.

Results (Continued)

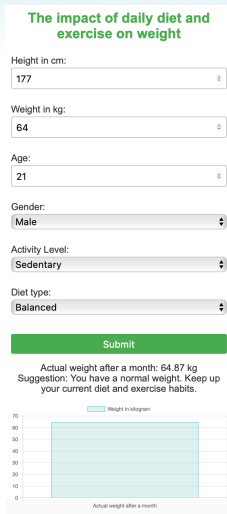


Figure I. An example of actual weight.

Results (Continued)

Sedentary	Light	Moderate	Active	Very active
1.2	1.375	1.55	1.725	1.9

Table I. Consume calories from the exercise.

Vegetarian	Meat	Lacto ovo vegetarian	Balanced
1800	2500	2200	2000

Table II. Consume calories from the daily diet.

Results (Continued)

$$\text{Male's BMR} = 10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$\text{Female's BMR} = 10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

Results (Continued)

$$\text{Calories per day} = \text{BMR} \times \text{Activity}$$

$$\text{Intake} = \text{Daily diet type}$$

$$\text{Calorie deficit} = \text{Intake} - \text{Calories per day}$$

$$\text{Weight changes} = \frac{\text{Calorie deficit}}{7700}$$

$$\text{Actual weight after a month} = \text{Weight} + \text{Weight changes} \times 30$$

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Conclusion

- Using precise tools to calculate the actual weight, ensuring that users receive accurate and reliable measurements for better health management.
- Providing accurate options for computation, allowing users to input various parameters and receive tailored recommendations based on their unique needs.
- We learned fundamental front-end and back-end development, including figure display using JavaScript and Python, to develop an application that seamlessly integrates user data and visualizes results effectively.

Acknowledgment

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Thank you for listening! We wish you a pleasant day.