

Correlation Coefficient and Scatter Plotting

A fitness trainer collected data on Daily Calorie Intake, Exercise Duration, and BMI (Body Mass Index) for a group of individuals.

Daily Calorie Intake	Exercise Duration	BMI (Body Mass Index)
2000	60	25
2200	50	26
2500	30	28
1800	90	23
2300	45	27
2600	20	30
2100	75	24
1900	95	22
2700	15	31
3000	10	33

1. Create scatter plots for the following pairs of variables:
 - Daily Calorie Intake vs. BMI
 - Exercise Duration vs. BMI
 - Daily Calorie Intake vs. Exercise Duration
2. Calculate the Pearson correlation coefficient for each pair and interpret the results.
3. Based on the data, discuss whether consuming more calories leads to a higher BMI. How does exercise duration affect BMI?