The Effects of Caffeine and Noise on Pulse Rate: A 2x3 Factorial Experiment

Summary

This dashboard shows the effects of three caffeine dosages (13.5mg, 38mg, 80mg) and two noise levels (Quiet vs Loud) on pulse rate using a 2x3 factorial design. A total of 30 observations were collected.

Key Finding

Results suggest that both caffeine and noise influence heart rate, with RedBull and Loud noise associated with the highest pulse rates.

Author & Date:

Author: Hon Chi (Andy) Chan Date: May 2025

Pulse Rate by Caffeine Type and Noise Level (2x3 Factorial Design)

Caffeine / Noise Green Tea(13.5mg) Pepsi(38mg) RedBull(80mg) 85 Pulse Rate (bpm) 80 75 70 65 Quiet Quiet Loud Quiet Loud Loud

2×3 Factorial Heatmap of Pulse Rate by Caffeine and Noise

	Caffeine		
Noise	Green Tea(13.5mg)	Pepsi(38mg)	RedBull(80mg)
Loud	73.40	82.60	80.60
Quiet	70.20	77.00	75.60

Avg. Pulse Rate

70.20 82.60

Noise Level

Loud
Quiet