Do restaurants with higher average costs receive higher customer ratings?

Zomato Restaurants Dataset (Kaggle):7000+ data
Key variables:

- Rating (out of 5)
- Average cost for two

Zomato Restaurants Dataset

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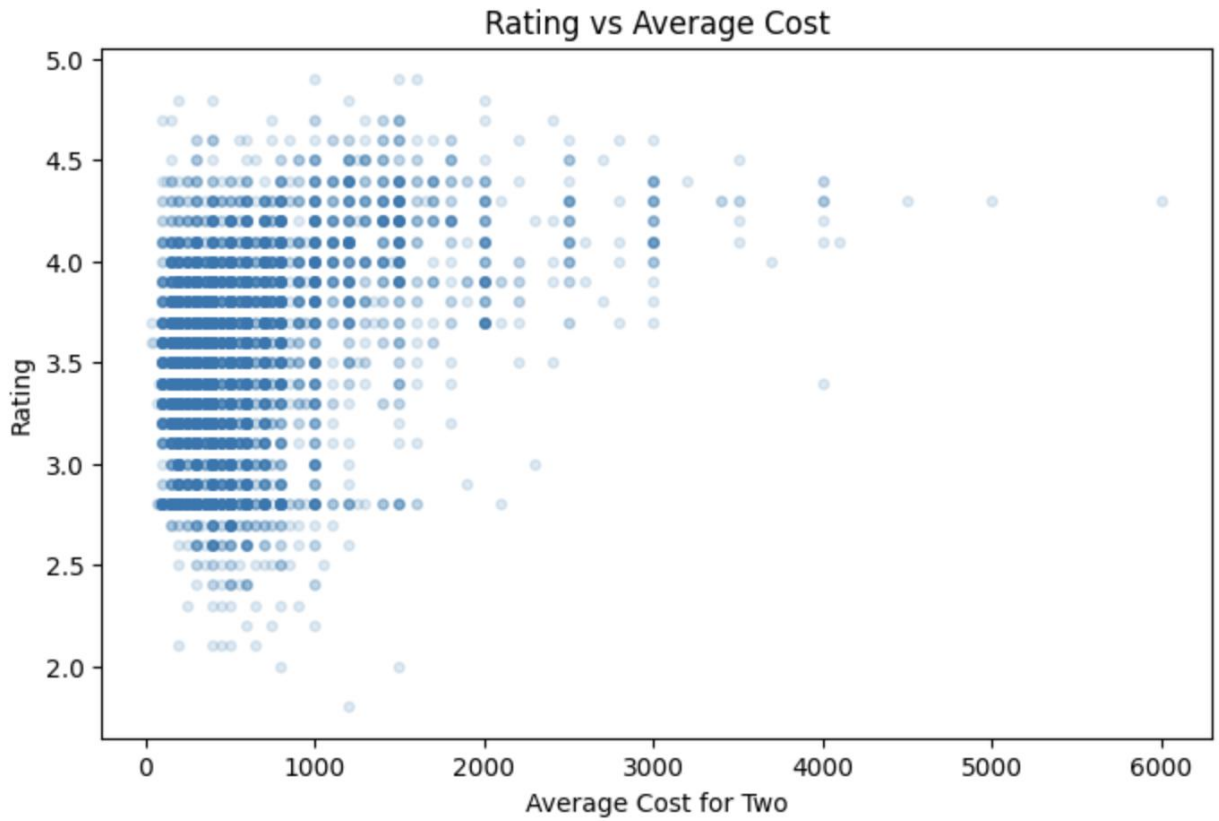
Data Card | Code (27) | Discussion (2) | Suggestions (0)

...estaurant type ...taurant type	# rate (out of 5) ratings average	# num of ratings number of people rate	# avg cost (two pe... avg cost	✓ online_order online facility
...ck Bites 40% ...sual Dining 23% ...er (2631) 37%	1.8 – 4.9	1 – 16.3k	40 – 6k	true 3727 52% false 3378 48%
...ck Bites	3.4	7	200.0	No
...ck Bites	3.9	48	400.0	Yes
...e	3.7	37	400.0	Yes
...ual Dining	2.7	135	550.0	Yes
...ual Dining	2.8	40	700.0	Yes
...eaway, Delivery	3.4	37	200.0	No
...ual Dining	4.1	305	700.0	Yes
...eaway, Delivery	2.8	40	300.0	No
...ck Bites	3.2	49	300.0	Yes



Null Hypothesis: $H0:Rating=\beta0+\beta1(Average\ Cost)+\epsilon$

H_0 : Average cost has no relationship with rating
H_1 : Higher average cost is associated with higher ratings

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OLS Regression Results

Dep. Variable:	rating	**R-squared:**	0.141
Model:	OLS	**Adj. R-squared:**	0.141
Method:	Least Squares	**F-statistic:**	1149.
Date:	Fri, 12 Dec 2025	**Prob (F-statistic):**	2.64e-233
Time:	09:28:15	**Log-Likelihood:**	-4006.9
No. Observations:	6984	**AIC:**	8018.
Df Residuals:	6982	**BIC:**	8031.
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	3.3107	0.008	418.785	0.000	3.295	3.326
avg_cost	0.0004	1.11e-05	33.897	0.000	0.000	0.000

Omnibus:	114.742	**Durbin-Watson:**	1.907
Prob(Omnibus):	0.000	**Jarque-Bera (JB):**	109.245
Skew:	-0.271	**Prob(JB):**	1.90e-24
Kurtosis:	2.716	**Cond. No.**	1.10e+03

p=0.000<0.05, reject H0.
There's a relationship between average cost and ratings

The coefficient = 0.0004 is positive,
P>|t| = 0.000
β_1 is statistically different from zero
If a coefficient is positive and statistically significant, then the relationship is statistically significantly positive.