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A Prediction Model of Nathan's Jacket Preferences

Nathan Boone

Intro

1. Fashion is often used as a form of self-communication—as a way to express, maintain, or change one's self-image.¹

2. Some of the main factors that have been associated with clothing preferences are status signaling, indication of group membership, fit, and appropriateness to the climate.²

Methods

Jackets ($N = 38$, 76% men's, $M_{\text{rating}} = 40$) were selected from those available at Eco Groovy Deals in Arcata, as well as from the author's and his buddies' closets. Jackets were rated on a 1-99 scale based on the author's liking.

Aspects of each jacket (measurements, size, material, etc.) were notated, and these variables were used to make a predictive model for ratings.

The model was used to predict how highly the author would rate a new jacket of specific dimensions.

Hypothesis

The predictive model will accurately predict how much the author will like a new jacket with an error margin of +/- 10 units.

The prediction model explains 77% of the variance in my jacket preferences and was able to accurately predict how much I would like a new jacket.

The margin of error for estimating the rating of a single jacket was much wider than the +/- 10 units (with a 1-99 scale) that I aimed for.



Results

Table 1. Jacket rating predicted by measurements, price diff, and size

	Step 1	Step 2	Step 3	Step 4
Shoulder to Shoulder ^ 2	-.38*	-.54***	-.54***	-.44***
Shoulder to Cuff ^ 2		-.58***	-.54***	-1.42***
Price difference			.001***	.004***
Size (reference = Medium)				
Small				.08
Large				-.03
Extra Large				-.13*
R^2	.15	.46	.69	.77
R^2 change	.15	.31***	.23***	.08*
Model F	3.04	7.14***	14.33***	11.83***

Note: Standardized Betas reported. * $p < .05$, ** $p < .01$, *** $p < .001$

A hierarchical regression found that jacket measurements (shoulder to shoulder & shoulder to cuff), price difference (retail price – purchase price), and jacket size all added significant predictive power for predictions of jacket ratings. The final predictive model was significant, $R^2 = .77$, $F(8, 29) = 11.83$, $p < .001$.

The 'new jacket' was rated as an 82. Given its dimensions, price difference, and size, the model predicted its rating as 63.22, 95% CI [33.79, 92.65].

The model predicted the mean value of jackets with the same attributes to be 63.22, 95% CI [52.59, 73.86].

Discussion

These results support my expectation that fit is the most important predictor of how highly I rate a jacket. Price difference was also a very strong predictor; price may be an indicator of quality, and the difference between retail price and purchase price may be an indicator of a steal!