Detecting Low-Effort IR Survey Responses

About

Our tool employs a sequential approach to identify respondents whose behavior indicates potential low-effort responses. We filter responses systematically to maintain the integrity of the survey results. Responses pass through filters one by one, with flagged responses excluded from subsequent steps. The filters are prioritized based on the severity of the violation, starting with the most serious issues.

Criteria

National Survey of Student Engagement (NSSE)

Behavior	Metric	Threshold
Completion time too short	Amount of time to complete survey	Survey completed in less than 3 minutes.
High question skip rate	% of questions skipped	Skipped over 25% of core questions (excluding demographics).
Straightlining behavior	Longest consecutive straightline	Straightlined 15 or more questions in a row.
	# of straightlined questions	3 or more times straightlining 7 or more questions in a row.
	# of straightlined question sets (i.e. scales)	3 or more scales straightlined.
Repetitive response pattern detected	% of times response is predicted by 2nd or 3rd most recent response (e.g. A-B- A-B, A-B-C-A-B-C)	Made same repetitive pattern 60% or more of the survey.
Unrealistic responses to "how many hours" question set	Sum of total hours indicated	0 hours or more than 140 hours per week.
Unusual responses to highly correlated items	Mahalanobis distance	Mahalanobis distance more than 3 standard deviations from mean.
	Pairwise correlations	Correlation below 0 for all item pairs with overall correlation coefficient of .50 or higher