

Evaluation confidence interval calculator

Fictional sample. Requires tailoring and responsible review.

Document control

Field	Value
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Classification	Fictional sample. Requires tailoring.
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Purpose and decision boundary

Calculate a 95 percent Wilson score interval for an observed evaluation success rate and compare its lower bound and width with customer-entered review thresholds.

The calculation assumes a binomial outcome and independent observations. Sampling design, representativeness and release authority require qualified human review.

Entered counts and review thresholds

Input	Value	Basis
Evaluation observations	400	Enter the complete number of independent observations in the evaluation sample.
Successful observations	356	Enter observations that met the same approved success criterion.

Input	Value	Basis
Target success rate percentage	90	Enter the organization's target rate for this evaluation. The tool does not supply a target.
Minimum acceptable lower bound percentage	85	Enter the lowest 95 percent interval bound the organization will accept for review.
Maximum interval width in percentage points	7	Enter the widest 95 percent interval the organization will accept for review.

Calculation findings

The interval quantifies sampling uncertainty under the stated assumptions. A responsible reviewer must assess the sample and decide the next step.

Displayed percentages are rounded to two decimal places. Gates use unrounded expressions.

Measure	Result
Observed success rate	89.00%
Difference from entered target	-1.00 percentage points
95 percent Wilson lower bound	85.55%
95 percent Wilson upper bound	91.70%
Interval width	6.15 percentage points
Entered minimum lower bound	85.00%
Entered maximum width	7.00 percentage points

Entered review gates

Gate	Result	Basis
Minimum Wilson lower bound	Met	Exact squared Wilson expression with $z = 1.96$ and the entered decimal bound.
Maximum Wilson width	Met	Exact squared Wilson expression with $z = 1.96$ and the entered decimal width.

Method and precision

- Observed rate = successful observations divided by all observations.
- The 95 percent interval uses the Wilson score method with $z = 1.96$.
- Interval width = upper bound minus lower bound.
- Threshold status requires both the entered lower-bound and maximum-width gates.
- Counts and ratio gates use exact integer cross-products.
- The Wilson calculation uses $z = 1.96$, an approximation for a two-sided 95 percent interval. It is not an exact binomial interval.
- JSON and the workbook retain unrounded numeric observations. Those are floating-point approximations. Gate decisions use exact count and decimal expressions.

Responsible review

- The calculation assumes a binomial outcome and independent observations. Sampling design, representativeness and release authority require qualified human review.
- Confirm population completeness, labels, sampling and comparability against retained source evidence. This calculator accepts entered aggregate counts and does not inspect individual records.
- Customer-entered gates do not establish statistical significance, fairness, legal compliance or release approval.

Official sources

Source	Provision	Date	Link
National Institute of Standards and Technology: Confidence intervals for a binomial proportion	Evaluation confidence interval calculator. Calculation method for the entered independent binary observations. Customer thresholds and sampling validity are not supplied.	October 7, 2026	https://www.itl.nist.gov/div898/handbook/prc/section2/prc241.htm
National Institute of Standards and Technology: Binomial proportion observations and sampling	Evaluation confidence interval calculator. Statistical sampling context. This tool does not conduct the hypothesis tests on this source page.	October 7, 2026	https://www.itl.nist.gov/div898/handbook/prc/section2/prc24.htm