试验分析、评估与R @ebay

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ebay Experiment Platform

Controlled A/B 测试
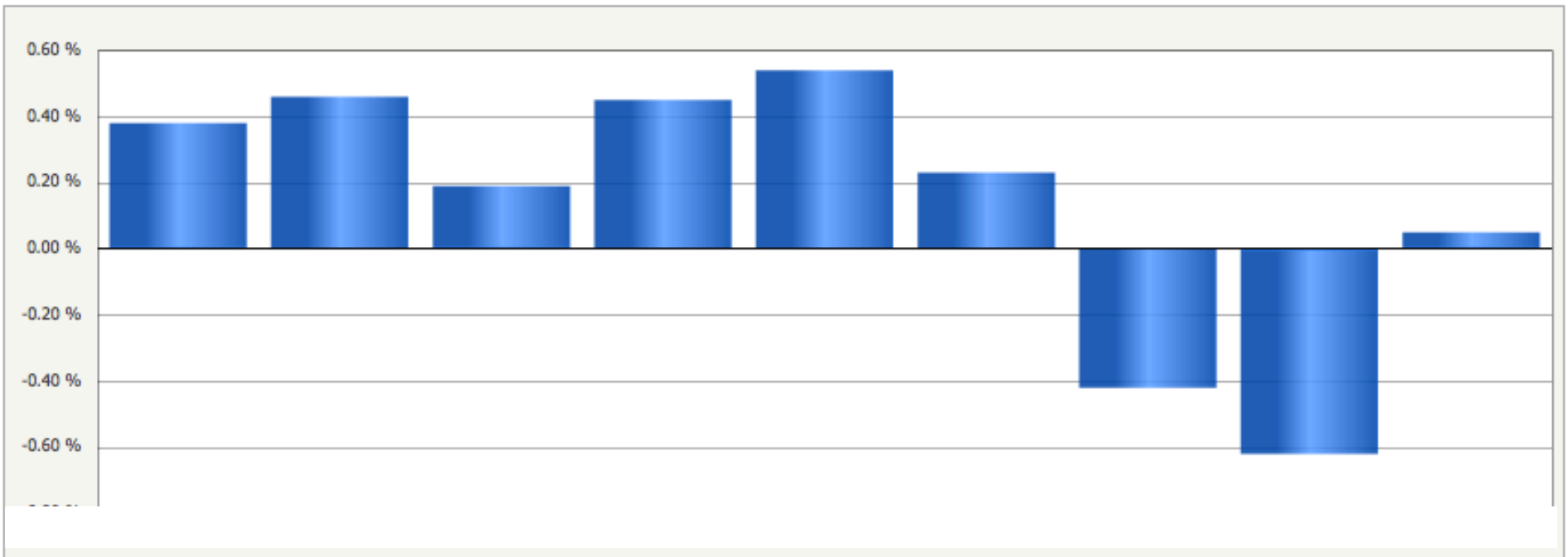
Setup	Run	Measure/ Evaluation	Complete

用户 → 测试组

用户 → Control组

财务指标

用户行为

商业指标

Evaluation Metrics

- 财务类指标

- 用户行为指标

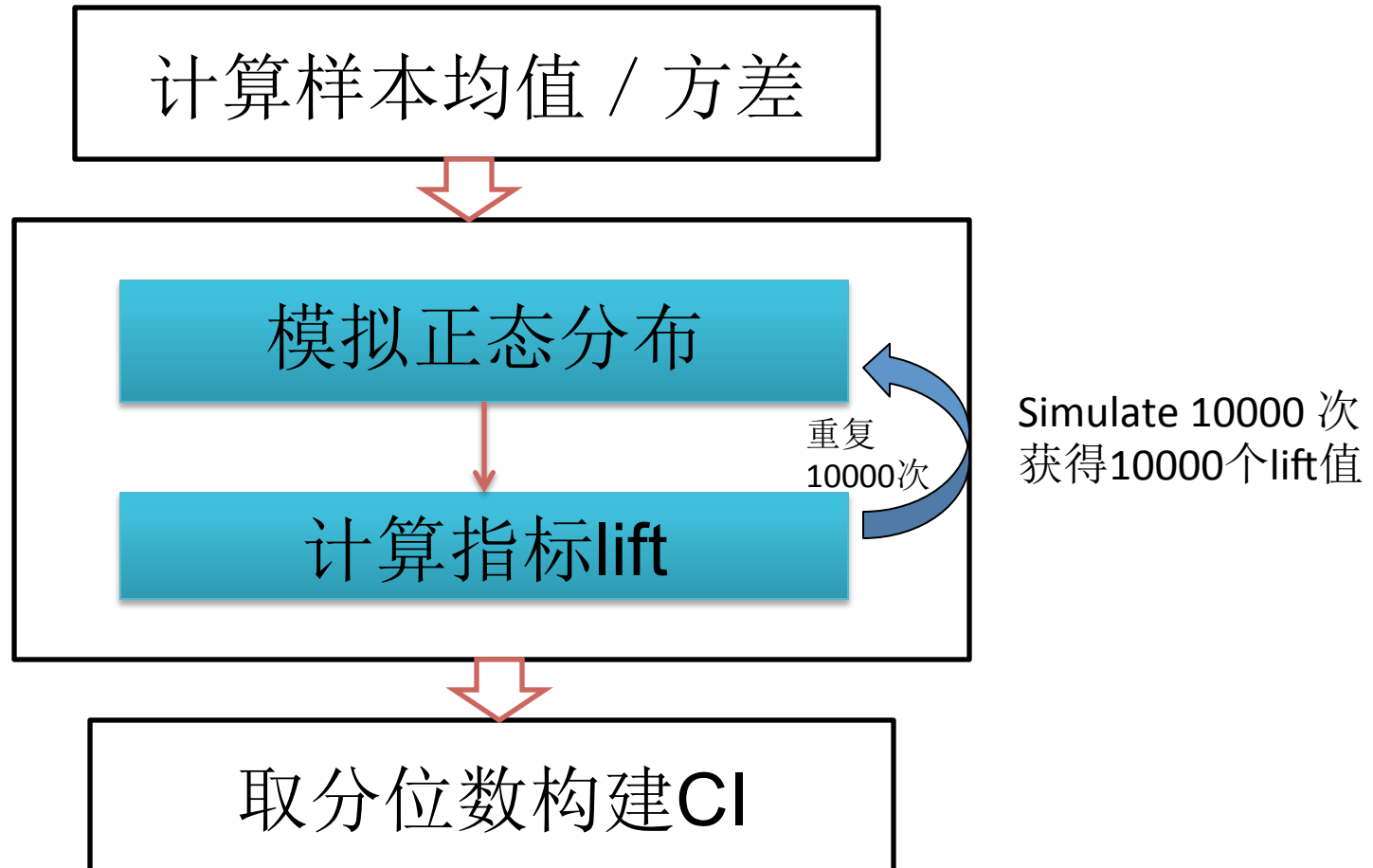- 商业指标

Why Need Confidence Interval?

- 和对比组比较，试验A在某一个指标上有0.45％的增长，那么可以评定试验A的算法是优于control组吗？
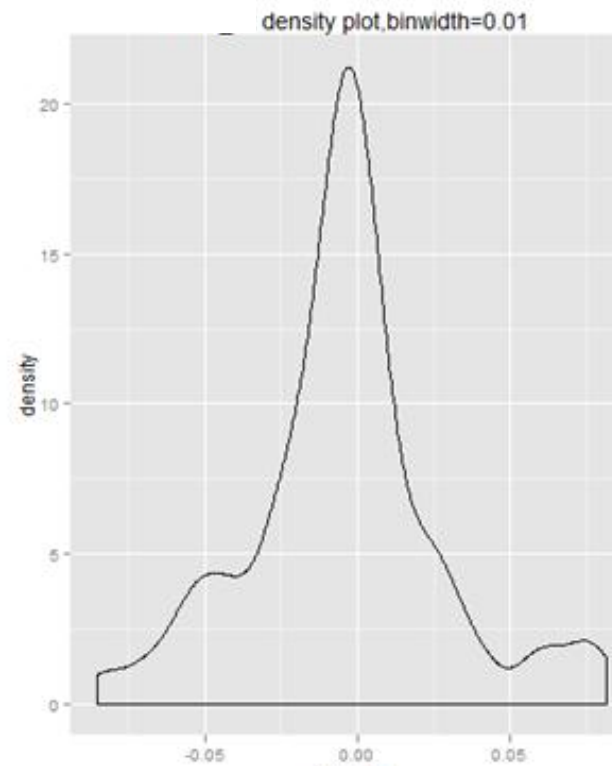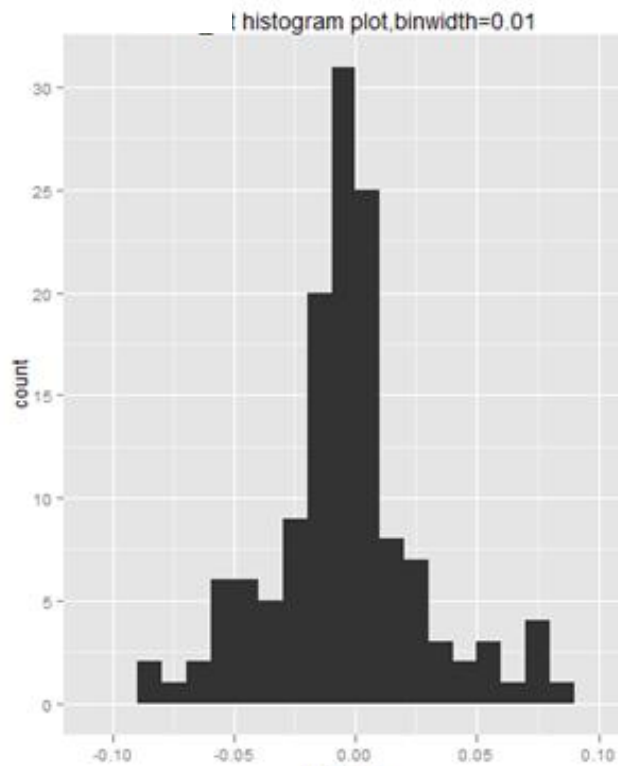
- Answer: No!

Distribution

正态分布

非正态分布

Simulation to Construct Confidence Interval

计算样本均值 / 方差

模拟正态分布

重复
10000次

计算指标lift
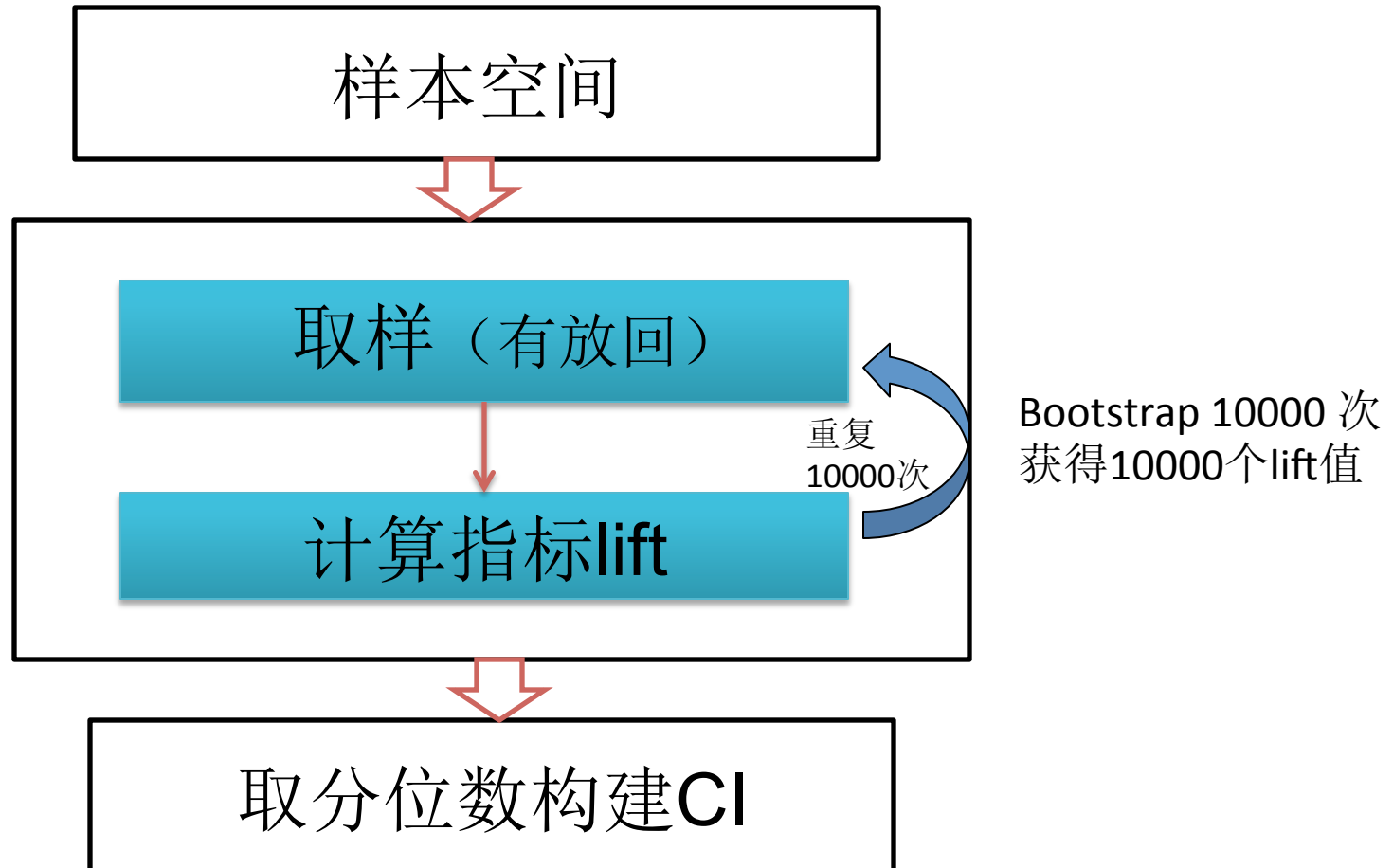
Simulate 10000 次
获得10000个lift值

取分位数构建CI

Bootstrap

- 财务类指标

- 时间相关的用户行为指标

Bootstrap to Construct Confidence Interval

Confidence Interval Tool

Confidence Intervals for A/B Tests

This tool support CIs for cumulative dailies of GUID based A/B tests. It requires an Experiment ID and one or more Treatment IDs and generates an email with CI plots for key behavioral and financial metrics. Users can choose to remove or retain outliers.

- Check on "Outlier Removal" to use outlier removed metrics.
- Check on CI with you want (90% is default value).
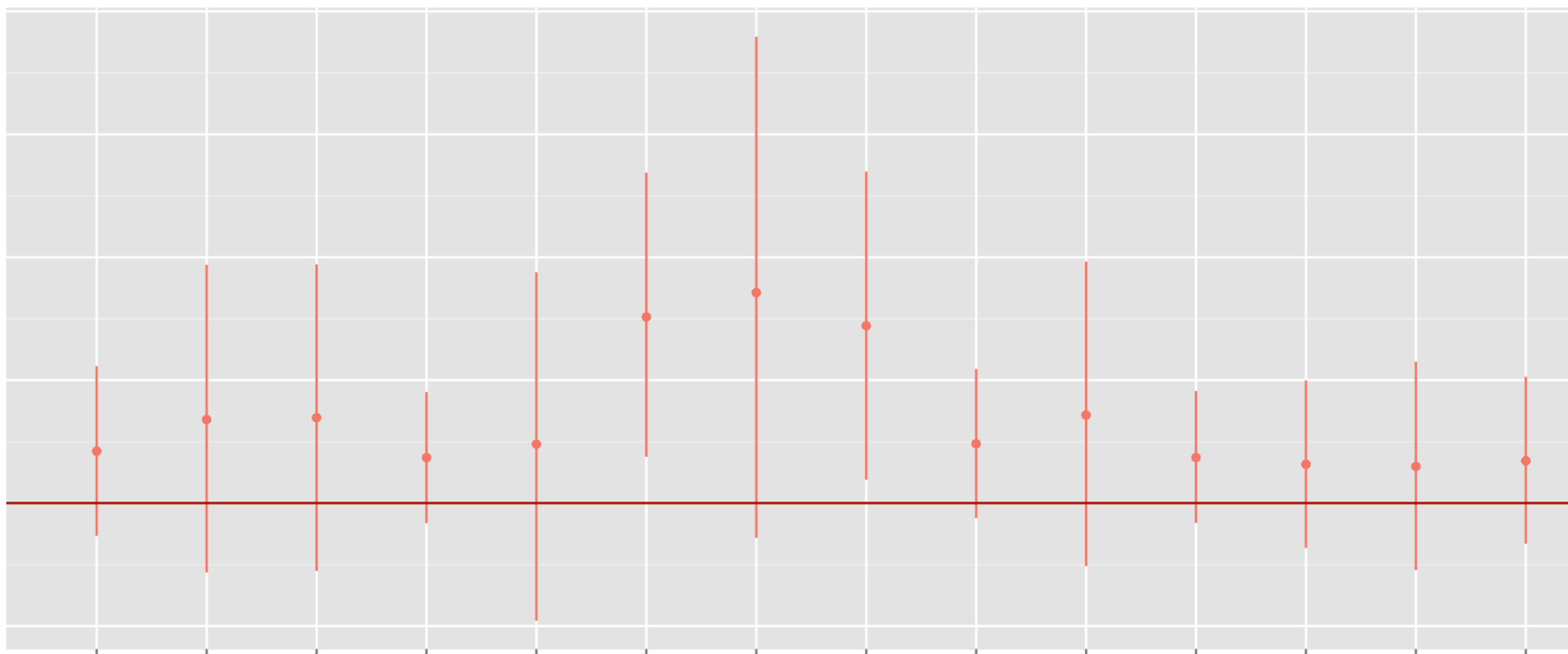
Step 4 – Others

Outlier Removal
☑

Add Vertical Report
☑

CI Width
☐80% ☑90% ☐95% ☐99%

Back **Next**

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Confidence Interval Tool

R 扩展包

- 平台
  - 'RJDBC'：用于连接Teradata
  - 'snowfall'：解决海量数据的计算问题

- 统计方面
  - 'nortest'：正态性检测
  - 'boot'：bootstrap，取样

- Others
  - 'ggplot2'
  - 'sqldf'

Contact us: **@ebayTech** (新浪微博)

Thank You!