

Question 3:

As context, here's a 10,000-foot view of the Acme Corp product:

- A consumer posts a **request** for a service needed. Every request is in some **category** (e.g., Catering, Personal Training, Interior Design) and some **location** (e.g., New York, San Francisco).
- We match the request up with appropriate service providers and send each of those providers an **invite** to quote on the request.
- Providers view the invite and some choose to send a **quote** to the consumer expressing interest.

For the following questions, please be as specific and thorough as possible in your answers, quantify your statements as much as you can, and explain your computations. Include code you used where appropriate. You're free to use any software you like; it's OK if we can't run the analysis ourselves. You're encouraged to be as technical as you like in your answers, they don't need to be accessible to general readers (though that's an important part of the actual job).

Split Test Analysis

I've just concluded a test of our *quote form*. After receiving an invite, service providers come to the quote form to view the consumer request and choose whether or not to pay to send a quote. My goal was to determine if certain changes to the design of the form would cause more providers to send a quote after coming to the page.

Over the course of a week, I divided invites from about 3000 requests among four new variations of the quote form as well as the baseline form we've been using for the last year.

Here are my results:

- Baseline: 32 quotes out of 595 viewers
- Variation 1: 30 quotes out of 599 viewers
- Variation 2: 18 quotes out of 622 viewers
- Variation 3: 51 quotes out of 606 viewers
- Variation 4: 38 quotes out of 578 viewers

What's your interpretation of these results? What conclusions would you draw? What questions would you ask me about my goals and methodology? Do you have any thoughts on the experimental design? Please provide statistical justification for your conclusions and explain the choices you made in your analysis.

For the sake of your analysis, you can make whatever assumptions are necessary to make the experiment valid, so long as you state them. So, for example, your response might follow the form "I would ask you A, B and C about your goals and methodology. Assuming the answers are X, Y and Z, then here's my analysis of the results... If I were to run it again, I would consider changing...".

Here is the data formatted as a CSV:

Bucket	Quotes	Views
Baseline	32	595
Variation 1	30	599
Variation 2	18	622
Variation 3	51	606
Variation 4	38	578

Quotes per Views

$$\begin{aligned} 32/595 &= 0.054 \\ 30/599 &= 0.05 \\ 18/622 &= 0.0289 \\ 51/606 &= 0.084 \\ 38/578 &= 0.0657 \end{aligned}$$

Are quotes unique? (No repeat requests?)