

Trying to find significant factors in experimental results

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Hi,

I've asked a 100 subjects to assess a quantity. For simplicity, assume I've asked them to estimate the length of a piece of wood. I've also asked each subject a number of questions (sex, age, whether they're short sighted or long sighted, if they were glasses, contact lenses or nothing).

My hypothesis is that the results are independent of all question answers.

How can I prove this? As a first attempt, I've partitioned the subjects into every possible partition, based on the question answers, where I've still got a minimum of ten subjects in the smallest population. I then ran ANOVA for the two formed populations, and repeated for every possible partition.

This strikes me as being a bit clumsy, but I'm not sure how else I can do this. My reading of Factorial ANOVA suggests that every population needs to be of the same size, and so this isn't possible with my data.

Can anyone point me in the direction of a technique that could be used to analyse my data?

Thanks,

Rob

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